CONSTRUCTION OF AERIAL CABLE PLANT

Purpose: This addendum is issued to supplement Section 635 with information relative to the installation of Extra High Strength Steel Suspension Strand.

2. HANDLING AND STORAGE

2.02 Proper handling and storage of telephone suspension strand will prevent accelerated corrosion or physical damage. Improper handling or storage may decrease the normally expected service life and may also create construction problems. The storage methods suggested in REA TE & CM 616, "Construction of Bare Open Wire Plant", should be followed.

3. STRAND TENSIONING

3.01 At the time of strand tensioning the temperature should not be taken in direct sunlight. Hot sun on strand will increase the strand temperature above that in adjacent shade. The tension required for the shade temperature, if applied to the strand at a hotter temperature, will result in some tension increase when the strand cools. However, this has been taken into consideration in the sag and tension tables.

3.02 The initial strand tension required depends on the size of the strand, the temperature at which it is tensioned and on the average span length involved. There is a definate tension for each of the three strand sizes for each average span length at each temperature. Tension data for the various temperatures and average span lengths for the 1/4-inch, 5/16-inch and 7/16-inch Extra High Strength Galvanized Steel Strands are given in Tables 1b, 2b and 3b.

3.03 The use of a dynamometer is recommended rather than sag measurements in strand tensioning because strand sag is difficult to measure accurately. The shunt type dynamometer is more useful than the tension type because it can also be used to test the tension after the strand is installed.

4. TABLES FOR SAGS AND TENSIONS WITH CABLES IN PLACE

4.01 Initial sags and tensions with plastic-sheath cable in place and final sags for ground clearance determinations for 1/4-inch, 5/16-inch and 7/16-inch Extra High Strength Galvanized Steel Supporting Strands are available from the Outside Plant Branch of REA.

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.20 Pounds per foot with Diameter 0.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	3.5	1409	5.4	1415	7.8	1423	11.0	1435
No ice, no wind	20	3.7	1317	5.7	1326	8.3	1337	11.6	1352
No ice, no wind	40	4.0	1222	6.1	1232	8.9	1246	12.4	1263
No ice, no wind	60	4.3	1127	6.6	1138	9.6	1154	13.3	1175
No ice, no wind	80	4.7	1032	7.2	1046	10.3	1064	14.3	1088
No ice, no wind	100	5.2	936	7.8	956	11.3	980	15.4	1005
Heavy-Final									
1/2" ice, no wind	32	11.3	--	16.3	--	23.2	--	29.9	--
No ice, no wind	60	4.4	1082	7.0	1086	10.1	1095	13.9	1110
No ice, no wind	100	5.6	880	8.6	893	12.1	911	16.3	934
Medium-final									
1/4" ice, no wind	32	7.1	--	10.8	--	15.2	--	20.6	--
No ice, no wind	60	4.4	1097	6.8	1107	9.8	1122	13.5	1138
No ice, no wind	100	5.2	896	8.3	912	11.8	933	15.8	958
Light-Final									
No ice, no wind	60	4.3	1109	6.7	1121	9.7	1135	13.2	1152
No ice, no wind	100	5.4	903	8.2	924	11.6	947	15.6	971
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	14.5	1448	17.8	1462	21.6	1476	25.7	1490
No ice, no wind	20	15.2	1366	18.5	1382	22.5	1382	26.9	1414
No ice, no wind	40	16.2	1280	20.3	1298	24.1	1317	28.5	1336
No ice, no wind	60	17.3	1196	21.4	1217	25.7	1239	30.3	1261
No ice, no wind	80	18.6	1113	22.8	1137	27.4	1161	32.2	1184
No ice, no wind	100	19.9	1030	24.4	1056	29.2	1082	34.2	1107
Heavy-Final									
1/2" ice, no wind	32	37.5	--	45.6	--	53.8	--	62.5	--
No ice, no wind	60	17.6	1156	21.9	1175	26.6	1193	31.5	1212
No ice, no wind	100	20.3	983	25.1	1008	30.3	1032	35.5	1057
Light-Final									
No ice, no wind	60	17.4	1171	21.5	1189	26.1	1208	30.9	1227
No ice, no wind	100	20.1	996	24.8	1021	29.8	1046	34.9	1071

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.20 Pounds per foot with Diameter 0.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tensio in Poun
Initial									
No ice, no wind	0	29.9	1505	34.5	1521	39.2	1536	44.6	155
No ice, no wind	20	31.5	1431	36.2	1447	41.1	1466	46.6	148
No ice, no wind	40	33.3	1355	38.2	1374	43.3	1393	49.0	141
No ice, no wind	60	35.2	1282	40.3	1303	45.7	1325	51.5	134
No ice, no wind	80	37.3	1207	42.6	1230	48.2	1253	54.2	127
No ice, no wind	100	39.5	1132	45.2	1157	50.9	1184	57.0	120
Heavy-Final									
1/2" ice, no wind	32	71.4	--	80.8	--	90.6	--	100.4	--
No ice, no wind	60	37.9	1192	43.4	1208	49.3	1225	55.9	12
No ice, no wind	100	42.7	1046	48.8	1068	55.2	1091	62.1	11
Medium-Final									
1/4" ice, no wind	32	52.0	--	59.2	--	66.7	--	74.6	-
No ice, no wind	60	36.6	1231	41.9	1249	47.6	1268	54.2	12
No ice, no wind	100	41.3	1081	47.0	1104	53.3	1128	60.1	11
Light-Final									
No ice, no wind	60	36.0	1246	41.2	1266	46.9	1286	53.3	13
No ice, no wind	100	40.7	1096	46.4	1120	52.6	1145	59.1	11

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	50.3	1569	56.3	1586	62.5	1604	68.7	1(
No ice, no wind	20	52.5	1503	58.5	1522	65.0	1541	71.5	1
No ice, no wind	40	55.0	1432	61.2	1453	67.8	1472	74.5	1
No ice, no wind	60	57.7	1467	64.0	1388	70.7	1410	77.6	1
No ice, no wind	80	60.5	1299	67.1	1323	74.0	1346	81.0	1
No ice, no wind	100	63.5	1235	70.3	1261	77.3	1286	84.6	1
Heavy-Final									
1/2" ice, no wind	32	110.6	--	121.4	--	132.4	--	143.7	
No ice, no wind	60	62.7	1260	69.7	1278	76.8	1296	84.2	
No ice, no wind	100	69.2	1135	76.4	1157	84.0	1179	91.7	
Medium-Final									
1/4" ice, no wind	32	82.6	--	91.1	--	99.7	--	108.7	
No ice, no wind	60	60.8	1307	67.5	1326	74.5	1346	81.5	
No ice, no wind	100	66.9	1177	73.9	1201	81.0	1225	88.5	
Light-Final									
No ice, no wind	60	59.8	1326	66.4	1347	73.2	1367	80.1	
No ice, no wind	100	65.8	1195	72.7	1220	79.8	1244	86.9	

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.20 Pounds per foot with Diameter 0.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	75.0	1639	81.6	1657	88.2	1677	95.5	1695
No ice, no wind	20	78.1	1578	84.9	1597	91.8	1615	99.2	1634
No ice, no wind	40	81.3	1513	88.3	1533	95.4	1554	103.0	1574
No ice, no wind	60	84.6	1453	91.7	1474	99.1	1495	106.9	1515
No ice, no wind	80	88.2	1392	95.6	1414	103.2	1437	111.2	1459
No ice, no wind	100	92.0	1336	99.6	1360	107.4	1384	115.5	1407
Heavy-Final									
1/2" ice, no wind	32	155.5	--	80.8	167.7	180.6	--	193.3	--
No ice, no wind	60	91.8	1333	99.7	1352	108.0	1372	116.5	1389
No ice, no wind	100	99.9	1223	108.3	1246	117.0	1268	125.9	1287
Medium-Final									
1/4" ice, no wind	32	118.0	--	127.7	--	138.0	--	148.1	--
No ice, no wind	60	88.7	1386	96.6	1407	103.8	1427	111.8	1447
No ice, no wind	100	96.1	1272	103.9	1295	112.2	1318	120.5	1340
Light-Final									
No ice, no wind	60	87.1	1410	94.4	1431	102.0	1452	109.9	1473
No ice, no wind	100	94.4	1292	101.2	1315	110.4	1338	118.4	1361

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	103.1	1713	111.1	1730	118.7	1746	126.9	1763
No ice, no wind	20	107.0	1653	115.1	1671	122.9	1689	131.1	1707
No ice, no wind	40	111.0	1594	119.1	1614	127.2	1633	135.5	1653
No ice, no wind	60	115.1	1536	123.2	1556	131.6	1576	140.0	1596
No ice, no wind	80	119.4	1482	127.7	1504	136.2	1525	144.8	1546
No ice, no wind	100	123.8	1430	132.3	1453	140.9	1475	149.7	1497
Heavy-Final									
1/2" ice, no wind	32	206.3	--	219.5	--	232.9	--	246.5	--
No ice, no wind	60	125.3	1406	134.2	1423	143.3	1438	152.8	1454
No ice, no wind	100	135.1	1306	144.5	1325	154.0	1343	163.8	1360
Medium-Final									
1/4" ice, no wind	32	158.7	--	169.3	--	180.1	--	191.1	--
No ice, no wind	60	120.1	1467	128.2	1486	137.5	1505	146.7	1524
No ice, no wind	100	129.1	1361	137.9	1382	147.0	1403	156.6	1224
Light-Final									
No ice, no wind	60	118.1	1493	126.2	1513	134.8	1532	143.7	1551
No ice, no wind	100	127.0	1382	135.6	1404	144.5	1426	153.9	1447

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.20 Pounds per foot with Diameter 0.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.	
		Sag	Tension	Sag	Tension	Sag	Tension
	Temp. °F	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds
Initial							
No ice, no wind	0	135.3	1779	143.9	1795	152.4	1811
No ice, no wind	20	139.6	1725	148.5	1743	157.2	1759
No ice, no wind	40	144.1	1672	153.1	1690	162.0	1708
No ice, no wind	60	148.8	1616	157.9	1636	166.8	1656
No ice, no wind	80	153.7	1567	162.9	1586	172.2	1605
No ice, no wind	100	158.7	1518	168.0	1539	177.6	1559
Heavy-Final							
1/2" ice, no wind	32	260.3	--	274.6	--		
No ice, no wind	60	162.8	1467	173.5	1482		
No ice, no wind	100	173.9	1377	184.7	1393		
Medium-Final							
1/4" ice, no wind	32	202.3	--	213.8	--	225.6	--
No ice, no wind	60	156.2	1542	165.8	1560	175.8	1577
No ice, no wind	100	166.3	1444	176.3	1464	186.6	1482
Light-Final							
No ice, no wind	60	153.0	1569	162.5	1587	172.2	1605
No ice, no wind	100	163.6	1467	173.5	1487	183.6	1507

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	5.5	1430	8.2	1455	11.7	1482	15.7	1510
No ice, no wind	20	5.8	1344	8.8	1372	12.5	1402	16.7	1432
No ice, no wind	40	6.2	1258	9.4	1288	13.3	1319	17.7	1352
No ice, no wind	60	6.7	1169	10.2	1203	14.3	1239	18.8	1275
No ice, no wind	80	7.3	1080	11.0	1119	15.3	1160	20.1	1201
No ice, no wind	100	7.9	994	11.8	1037	16.3	1082	21.3	1127
Heavy-Final									
1/2" ice, no wind	32	14.3	--	20.9	--	28.2	--	35.9	--
No ice, no wind	60	7.0	1121	10.7	1149	15.1	1180	19.9	1211
No ice, no wind	100	8.5	936	12.9	978	17.5	1020	22.8	1061
Medium-Final									
1/4" ice, no wind	32	10.1	--	14.8	--	20.4	--	26.6	--
No ice, no wind	60	6.8	1140	10.5	1171	14.8	1203	19.5	1237
No ice, no wind	100	8.3	955	12.5	997	17.2	1039	22.3	1082
Light-Final									
No ice, no wind	60	6.8	1150	10.4	1180	14.6	1213	19.2	1247
No ice, no wind	100	8.2	964	12.3	1009	17.0	1054	22.1	1098
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	20.3	1540	25.2	1570	30.6	1602	36.6	1635
No ice, no wind	20	21.4	1464	26.5	1497	32.0	1531	38.2	1566
No ice, no wind	40	22.6	1386	27.8	1423	33.4	1461	39.7	1499
No ice, no wind	60	24.0	1313	29.2	1353	35.0	1393	41.4	14,34
No ice, no wind	80	25.4	1243	30.7	1285	36.6	1328	43.2	1371
No ice, no wind	100	26.9	1172	32.3	1218	38.3	1264	44.9	1309
Heavy-Final									
1/2" ice, no wind	32	44.5	--	53.7	--	63.3	--	73.2	--
No ice, no wind	60	25.3	1244	30.9	1278	37.1	1312	43.7	1347
No ice, no wind	100	28.7	1102	34.7	1142	41.3	1183	48.4	1224
Medium-Final									
1/4" ice, no wind	32	33.5	--	40.6	--	48.2	--	56.5	--
No ice, no wind	60	24.7	1272	30.2	1308	36.1	1346	42.7	1385
No ice, no wind	100	28.1	1126	34.0	1171	40.3	1214	47.2	1259
Light-Final									
No ice, no wind	60	24.5	1284	29.8	1321	35.7	1360	42.1	1400
No ice, no wind	100	27.8	1139	33.4	1187	39.6	1231	46.3	1275

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	42.8	1668	49.4	1703	56.0	1737	62.7	1773
No ice, no wind	20	44.5	1602	51.3	1638	58.1	1675	65.0	1712
No ice, no wind	40	46.2	1537	53.2	1576	60.3	1614	67.5	1652
No ice, no wind	60	48.2	1474	55.2	1515	62.5	1555	69.9	1594
No ice, no wind	80	50.2	1413	57.4	1455	64.9	1496	72.5	1537
No ice, no wind	100	52.3	1353	59.8	1397	67.5	1441	75.3	1483
Heavy-Final									
1/2" ice, no wind	32	83.4	--	93.9	--	105.0	--	116.5	--
No ice, no wind	60	50.9	1383	58.4	1419	66.2	1456	74.4	1493
No ice, no wind	100	56.0	1264	63.9	1305	72.2	1345	80.4	1385
Medium-Final									
1/4" ice, no wind	32	65.0	--	73.6	--	82.7	--	92.1	--
No ice, no wind	60	49.5	1425	56.7	1464	64.3	1503	72.2	1541
No ice, no wind	100	54.5	1302	62.0	1345	69.9	1387	78.2	1428
Light-Final									
No ice, no wind	60	48.9	1441	56.1	1482	63.6	1521	71.5	1559
No ice, no wind	100	53.6	1318	61.1	1361	69.0	1402	77.2	1443

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	69.8	1809	77.5	1843	85.1	1875	93.1	1909
No ice, no wind	20	72.2	1751	80.1	1786	87.8	1821	96.0	1855
No ice, no wind	40	74.8	1692	82.8	1728	90.7	1764	99.1	1799
No ice, no wind	60	77.4	1635	85.5	1672	93.7	1709	102.1	1745
No ice, no wind	80	80.3	1578	88.5	1617	96.8	1655	105.4	1692
No ice, no wind	100	83.3	1525	91.5	1565	100.0	1604	108.7	1643
Heavy-Final									
1/2" ice, no wind	32	128.3	--	140.7	--	153.4	--	166.4	--
No ice, no wind	60	82.9	1532	91.5	1569	100.6	1604	110.0	1637
No ice, no wind	100	88.8	1426	97.6	1463	107.0	1500	116.8	1535
Medium-Final									
1/4" ice, no wind	32	101.9	--	111.9	--	122.4	--	133.2	--
No ice, no wind	60	80.4	1578	88.6	1613	97.3	1648	106.3	1682
No ice, no wind	100	86.5	1469	95.0	1507	103.8	1545	113.1	1582
Light-Final									
No ice, no wind	60	79.6	1598	87.6	1634	96.1	1669	104.9	1704
No ice, no wind	100	85.7	1484	94.1	1523	102.8	1561	111.7	1598

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	101.5	1943	110.1	1975	119.2	2007	128.3	2039
No ice, no wind	20	104.3	1889	113.2	1922	122.4	1955	131.6	1988
No ice, no wind	40	107.6	1834	116.5	1868	125.8	1903	135.0	1936
No ice, no wind	60	110.9	1782	119.8	1817	129.2	1852	138.8	1886
No ice, no wind	80	114.3	1729	123.2	1766	133.0	1802	142.7	1837
No ice, no wind	100	117.7	1680	126.9	1717	136.6	1754	146.4	1790
Heavy-Final									
1/2" ice, no wind	32	179.7	--	193.1	--	206.8	--	220.8	--
No ice, no wind	60	119.6	1668	129.3	1696	139.4	1723	149.9	1746
No ice, no wind	100	126.7	1568	136.7	1600	147.0	1630	157.8	1655
Medium-Final									
1/4" ice, no wind	32	144.1	--	155.3	--	166.9	--	178.6	--
No ice, no wind	60	115.4	1716	124.7	1750	124.7	1784	144.2	1817
No ice, no wind	100	122.5	1617	132.1	1653	142.0	1689	152.3	1724
Light-Final									
No ice, no wind	60	113.9	1738	123.0	1772	132.5	1806	142.2	1841
No ice, no wind	100	120.9	1636	130.3	1672	140.0	1708	150.2	1743
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	137.7	2071	147.3	2102	157.0	2133	166.8	2163
No ice, no wind	20	141.2	2020	150.8	2053	160.7	2084	170.7	2116
No ice, no wind	40	144.7	1970	154.5	2003	164.5	2035	174.7	2067
No ice, no wind	60	148.6	1921	158.6	1955	168.7	1988	179.0	2021
No ice, no wind	80	152.7	1873	162.7	1907	173.0	1941	183.3	1975
No ice, no wind	100	156.5	1825	166.7	1860	177.1	1895	187.7	1929
Heavy-Final									
1/2" ice, no wind	32	190.7	--	202.8	--	215.1	--	227.7	--
No ice, no wind	60	154.4	1851	164.7	1883	175.0	1915	185.6	1946
No ice, no wind	100	162.9	1758	173.5	1792	184.2	1824	195.2	1857
Medium-Final									
1/4" ice, no wind	32	190.7	--	202.8	--	215.1	--	227.7	--
No ice, no wind	60	154.4	1851	164.7	1883	175.0	1915	185.6	1946
No ice, no wind	100	162.9	1758	173.5	1792	184.2	1824	195.2	1857
Light-Final									
No ice, no wind	60	152.4	1874	162.6	1907	173.1	1940	183.7	1972
No ice, no wind	100	160.5	1778	171.1	1812	181.8	1847	192.7	1880

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	176.8	2194	186.9	2224	197.4	2253
No ice, no wind	20	180.7	2147	191.1	2177	201.6	2208
No ice, no wind	40	184.8	2099	195.3	2131	205.8	2162
No ice, no wind	60	189.4	2053	200.0	2086	210.6	2118
No ice, no wind	80	193.9	2008	204.6	2041	215.4	2074
No ice, no wind	100	198.3	1963	209.2	1997	220.2	2030
Heavy-Final							
1/4" ice, no wind	32	240.4	--	253.6	--	267.0	--
No ice, no wind	60	196.4	1977	207.5	2006	219.6	2036
No ice, no wind	100	206.4	1888	217.7	1919	229.2	1950
Medium-Final							
1/4" ice, no wind	32	240.4	--	253.6	--	267.0	--
No ice, no wind	60	196.4	1977	207.5	2006	219.6	2036
No ice, no wind	100	206.4	1888	217.7	1919	229.2	1950
Light-Final							
No ice, no wind	60	194.5	2003	205.5	2033	216.6	2064
No ice, no wind	100	203.6	1913	214.8	1944	226.2	1976

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	7.3	1473	12.2	1520	17.4	1567	22.8	1615
No ice, no wind	20	7.8	1386	12.8	1437	18.2	1489	23.8	1540
No ice, no wind	40	8.3	1306	13.5	1359	19.1	1414	24.8	1467
No ice, no wind	60	8.9	1225	14.3	1283	20.0	1341	25.9	1398
No ice, no wind	80	9.6	1142	15.2	1205	21.0	1267	27.0	1327
No ice, no wind	100	10.3	1062	16.2	1128	22.2	1194	28.3	1257
Heavy-Final									
1/2" ice, no wind	32	16.3	--	25.2	--	34.6	--	44.0	--
No ice, no wind	60	9.6	1173	15.2	1227	21.2	1282	27.3	1336
No ice, no wind	100	10.9	1007	17.2	1071	23.5	1134	30.0	1195
Medium-Final									
1/4" ice, no wind	32	13.0	--	19.9	--	26.9	--	34.2	--
No ice, no wind	60	9.1	1193	15.4	1250	20.7	1307	26.7	1363
No ice, no wind	100	10.7	1021	16.8	1086	23.0	1152	29.4	1215
Light-Final									
No ice, no wind	60	9.0	1202	14.6	1260	20.4	1316	26.3	1373
No ice, no wind	100	10.6	1033	16.6	1099	22.7	1165	29.0	1230

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	28.0	1663	33.8	1711	39.7	1758	46.2	1806
No ice, no wind	20	29.2	1592	35.1	1643	41.2	1694	47.8	1744
No ice, no wind	40	30.5	1521	36.5	1574	42.8	1629	49.5	1681
No ice, no wind	60	31.8	1454	38.0	1511	44.4	1566	51.3	1621
No ice, no wind	80	33.2	1387	39.6	1447	46.1	1504	53.2	1563
No ice, no wind	100	34.8	1321	41.3	1383	48.0	1444	55.2	1506
Heavy-Final									
1/2" ice, no wind	32	53.6	--	63.4	--	73.3	--	83.6	--
No ice, no wind	60	33.5	1388	40.2	1441	46.9	1492	54.2	1543
No ice, no wind	100	36.6	1255	43.5	1315	50.6	1373	58.2	1429
Medium-Final									
1/4" ice, no wind	32	41.6	--	49.1	--	56.9	--	65.2	--
No ice, no wind	60	32.7	1418	39.0	1472	45.6	1525	52.8	1578
No ice, no wind	100	35.8	1278	42.4	1340	49.2	1400	56.8	1458
Light-Final									
No ice, no wind	60	32.2	1428	38.5	1483	45.0	1538	--	--

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	53.2	1853	60.8	1901	68.7	1948	76.8	1996
No ice, no wind	20	55.0	1794	62.7	1844	70.8	1892	79.0	1943
No ice, no wind	40	58.7	1676	66.8	1728	75.0	1782	83.5	1833
No ice, no wind	60	58.7	1676	66.8	1728	75.0	1782	83.5	1833
No ice, no wind	80	60.6	1619	70.9	1674	77.2	1729	85.9	1782
No ice, no wind	100	62.9	1566	73.2	1621	79.6	1676	88.4	1732
Heavy-Final									
1/2" ice, no wind	32	94.3	--	105.3	--	117.1	--	129.1	--
No ice, no wind	60	61.9	1592	70.7	1640	79.6	1687	89.0	1732
No ice, no wind	100	66.4	1484	75.8	1537	85.3	1589	95.00	1641
Medium-Final									
1/4" ice, no wind	32	74.0	--	84.0	--	94.2	--	104.6	--
No ice, no wind	60	60.4	1630	68.9	1680	77.6	1730	86.6	1778
No ice, no wind	100	64.9	1516	73.6	1571	82.7	1624	91.9	1675
Light-Final									
No ice, no wind	60	59.8	1645	68.1	1696	76.7	1747	85.4	1797
No ice, no wind	100	64.3	1531	73.0	1584	81.8	1638	90.9	1691

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	85.0	2044	93.7	2091	102.8	2138	112.2	2186
No ice, no wind	20	87.6	1992	96.5	2039	105.6	2087	115.0	2135
No ice, no wind	40	90.0	1939	99.1	1986	108.4	2035	117.9	2084
No ice, no wind	60	92.4	1886	101.7	1935	111.2	1986	120.9	2084
No ice, no wind	80	94.9	1835	104.4	1886	114.0	1938	123.9	1988
No ice, no wind	100	97.6	1785	107.1	1837	116.9	1890	126.9	1941
Heavy-Final									
1/2" ice, no wind	32	141.7	--	154.4	--	167.6	--	181.6	--
No ice, no wind	60	98.5	1776	108.6	1818	118.8	1859	127.5	1901
No ice, no wind	100	105.0	1689	115.5	1735	126.2	1777	137.2	1817
Medium-Final									
1/4" ice, no wind	32	115.5	--	126.6	--	138.1	--	149.8	--
No ice, no wind	60	95.6	1827	105.2	1884	115.0	1921	125.2	1967
No ice, no wind	100	101.4	1726	111.1	1775	121.2	1824	131.8	1872
Light-Final									
No ice, no wind	60	94.5	1847	103.9	1895	113.6	1944	123.6	1991
No ice, no wind	100	99.8	1793	109.8	1843	120.0	1893	130.1	1892

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	121.9	2233	131.8	2278	142.2	2323	152.8	2367
No ice, no wind	20	124.9	2182	135.0	2228	145.4	2275	156.1	2320
No ice, no wind	40	127.8	2132	138.1	2179	148.6	2227	159.3	2273
No ice, no wind	60	58.7	1676	66.8	1728	75.0	1782	83.5	1833
No ice, no wind	80	133.8	2039	144.3	2087	155.0	2136	166.0	2184
No ice, no wind	100	62.9	1566	73.2	1621	79.6	1676	88.4	1732
Heavy-Final									
1/2" ice, no wind	32	196.2	--	--	--	--	--	--	--
No ice, no wind	60	140.8	1941	--	--	--	--	--	--
No ice, no wind	100	147.7	1853	--	--	--	--	--	--
Medium-Final									
1/4" ice, no wind	32	162.1	--	174.8	--	187.4	--	200.3	--
No ice, no wind	60	135.6	2013	146.3	2058	157.4	2103	168.5	2148
No ice, no wind	100	142-6	1919	153.8	1966	165.0	2013	176.4	2059
Light-Final									
No ice, no wind	60	133.9	2037	144.4	2084	155.2	2129	166.4	2175
No ice, no wind	100	140.8	1941	151.5	1988	162.7	2036	173.9	2083
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	163.4	2411	174.5	2453	185.5	2495	196.8	2537
No ice, no wind	20	166.8	2364	177.9	2407	189.1	2451	200.4	2493
No ice, no wind	40	170.2	2318	181.3	2363	192.6	2406	203.9	2449
No ice, no wind	60	173.6	2274	184.7	2320	196.1	2364	207.6	2408
No ice, no wind	80	177.0	2231	188.2	2286	199.7	2321	211.3	2366
No ice, no wind	100	180.6	2185	199.7	2232	203.3	2277	215.0	2323
Medium-Final									
1/4" ice, no wind	32	213.4	--	226.9	--	240.4	--	254.2	--
No ice, no wind	60	180.0	2192	191.5	2235	201.4	2277	215.2	2321
No ice, no wind	100	188.1	2104	199.9	2149	211.8	2194	224.0	2238
Light-Final									
No ice, no wind	60	177.8	2220	189.1	2265	200.8	2308	212.5	2353
No ice, no wind	100	185.2	2129	196.7	2175	208.5	220.4	220.4	2265

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
		Sag	Tension	Sag	Tension	Sag	Tension	Sag	Tension
	Temp. °F	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds
Initial									
No ice, no wind	0	208.2	2578	--	--	--	--	--	--
No ice, no wind	20	211.8	2534	--	--	--	--	--	--
No ice, no wind	40	215.4	2492	--	--	--	--	--	--
No ice, no wind	60	219.0	2451	--	--	--	--	--	--
No ice, no wind	80	222.8	2410	--	--	--	--	--	--
No ice, no wind	100	226.8	2368	--	--	--	--	--	--
Medium-Final									
1/4" ice, no wind	32	268.2	--	--	--	--	--	--	--
No ice, no wind	60	227.4	2363	--	--	--	--	--	--
No ice, no wind	100	236.4	2282	--	--	--	--	--	--
Light-Final									
No ice, no wind	60	224.4	2396						
No ice, no wind	100	232.8	2310						

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	9.1	1520	13.4	1585	18.6	1648	24.5	1712
No ice, no wind	20	9.6	1442	14.1	1510	19.4	1577	25.6	1643
No ice, no wind	40	10.2	1362	14.8	1434	20.3	1505	26.6	1575
No ice, no wind	60	10.9	1284	15.6	1360	21.2	1435	27.7	1509
No ice, no wind	80	11.5	1207	16.4	1287	22.2	1365	28.8	1443
No ice, no wind	100	12.2	1133	17.3	1218	23.2	1302	30.0	1380
Heavy-Final									
1/2" ice, no wind	32	17.8	--	25.4	--	34.0	--	43.3	--
No ice, no wind	60	11.3	1235	16.4	1306	22.4	1378	29.1	1449
No ice, no wind	100	12.7	1084	18.5	1165	25.0	1245	32.0	1323
Medium-Final									
1/4" ice, no wind	32	14.6	--	20.7	--	27.8	--	35.7	--
No ice, no wind	60	11.2	1256	16.1	1333	22.1	1407	28.6	1481
No ice, no wind	100	12.6	1100	18.1	1183	24.4	1264	31.4	1344
Light-Final									
No ice, no wind	60	11.0	1266	15.8	1340	21.5	1414	28.1	1487
No ice, no wind	100	12.5	1108	17.8	1193	23.9	1276	30.8	1257

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	31.0	1775	38.1	1837	45.7	1899	53.7	1963
No ice, no wind	20	32.2	1709	39.4	1775	47.2	1842	55.3	1907
No ice, no wind	40	33.4	1644	40.7	1713	48.7	1782	56.9	1849
No ice, no wind	60	34.7	1582	42.2	1653	50.3	1725	58.7	1793
No ice, no wind	80	36.0	1518	43.6	1594	52.0	1668	60.5	1741
No ice, no wind	100	37.4	1455	45.2	1540	53.8	1618	62.5	1692
Heavy-Final									
1/2" ice, no wind	32	53.1	--	63.6	--	74.5	--	85.9	--
No ice, no wind	60	36.4	1518	44.1	1586	52.4	1654	61.2	1719
No ice, no wind	100	39.5	1398	47.7	1473	56.2	1547	65.2	1617
Medium-Final									
1/4" ice, no wind	32	44.0	--	52.9	--	61.3	--	71.9	--
No ice, no wind	60	35.8	1551	43.5	1620	51.8	1688	60.5	1755
No ice, no wind	100	38.8	1423	46.8	1500	55.3	1575	64.2	1646
Light-Final									
No ice, no wind	60	35.2	1560	42.8	1631	51.0	1702	59.6	1771
No ice, no wind	100	38.2	1436	46.0	1413	54.5	1590	63.2	1661

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	10.6	1567	15.6	1650	21.4	1733	28.0	1814
No ice, no wind	20	11.3	1492	16.3	1579	22.3	1664	29.1	1747
No ice, no wind	40	11.9	1419	17.2	1510	23.2	1598	30.2	1685
No ice, no wind	60	12.5	1351	17.9	1443	24.2	1534	31.4	1623
No ice, no wind	80	13.3	1278	18.8	1375	25.2	1470	32.6	1564
No ice, no wind	100	14.2	1211	19.8	1310	26.4	1408	33.8	1504
Heavy-Final									
1/2" ice, no wind	32	19.6	--	27.4	--	36.3	--	46.1	--
No ice, no wind	60	13.1	1304	18.7	1393	25.2	1480	32.6	1566
No ice, no wind	100	14.8	1159	20.7	1255	27.6	1351	35.3	1444
Medium-Final									
1/4" ice, no wind	32	15.6	--	22.2	--	29.7	--	38.1	--
No ice, no wind	60	12.8	1323	18.5	1415	24.9	1505	32.2	1594
No ice, no wind	100	14.5	1175	20.5	1274	27.3	1373	34.8	1468
Light-Final									
No ice, no wind	60	12.7	1336	18.2	1428	24.5	1519	31.7	1608
No ice, no wind	100	14.4	1185	20.3	1285	27.0	1385	34.5	1482

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	35.2	1895	43.0	1974	51.5	2052	60.4	2128
No ice, no wind	20	36.5	1831	44.4	1912	52.9	1992	62.1	2070
No ice, no wind	40	37.7	1770	45.7	1854	54.5	1937	63.6	2018
No ice, no wind	60	38.9	1712	47.2	1800	56.0	1889	65.4	1967
No ice, no wind	80	40.3	1656	48.7	1745	57.7	1832	67.1	1915
No ice, no wind	100	41.7	1599	50.2	1691	59.3	1781	68.8	1867
Heavy-Final									
1/2" ice, no wind	32	56.6	--	67.9	--	79.8	--	92.2	--
No ice, no wind	60	40.6	1650	49.1	1732	58.3	1812	68.1	1890
No ice, no wind	100	43.6	1534	56.5	1621	61.9	1706	72.2	1787
Medium-Final									
1/4" ice, no wind	32	46.9	2695	56.7	--	67.0	--	77.9	--
No ice, no wind	60	40.0	1681	48.4	1765	57.4	1847	66.8	1927
No ice, no wind	100	42.9	1562	51.5	1652	60.8	1740	70.5	1823
Light-Final									
No ice, no wind	60	39.6	1694	47.9	1779	56.9	1861	66.2	1942
No ice, no wind	100	42.5	1576	51.2	1667	60.4	1755	69.8	1839

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	69.6	2204	79.5	2277	89.3	2351	99.3	2424
No ice, no wind	20	71.4	2148	81.3	2225	91.3	2301	101.4	2375
No ice, no wind	40	73.2	2098	83.1	2176	93.2	2253	103.5	2328
No ice, no wind	60	75.0	2048	85.0	2132	95.2	2205	105.5	2281
No ice, no wind	80	76.8	1998	87.0	2079	97.3	2158	107.7	2235
No ice, no wind	100	78.7	1951	88.9	2033	99.4	2113	110.0	2191
Heavy-Final									
1/2" ice, no wind	32	105.4	--	119.1	--	132.9	--	145.0	--
No ice, no wind	60	78.5	1966	89.1	2039	100.3	2110	111.4	2178
No ice, no wind	100	82.8	1865	93.8	1942	104.9	2016	116.3	3086
Medium-Final									
1/4" ice, no wind	32	89.1	--	100.9	--	112.7	--	124.7	--
No ice, no wind	60	76.8	2005	87.1	2082	97.6	2156	108.3	2228
No ice, no wind	100	80.7	1905	91.3	1984	102.0	2061	112.9	2131
Light-Final									
No ice, no wind	60	76.1	2022	86.2	2099	96.5	2176	107.1	2250
No ice, no wind	100	79.9	1922	90.3	2002	100.9	2080	111.6	2156
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	109.5	2495	120.0	2566	130.6	2637	141.5	2706
No ice, no wind	20	111.8	2449	122.3	2521	133.0	2593	143.9	2663
No ice, no wind	40	114.0	2402	124.6	2476	135.4	2549	146.4	2619
No ice, no wind	60	116.2	2356	126.9	2431	137.6	2505	149.0	2575
No ice, no wind	80	118.5	2311	129.4	2386	140.3	2460	151.61	2532
No ice, no wind	100	120.8	2267	131.9	2343	142.8	2417	154.38	2490
Heavy-Final									
1/2" ice, no wind	32	161.4	--	175.8	--	190.6	--	--	--
No ice, no wind	60	122.8	2242	134.4	2303	146.2	2361	--	--
No ice, no wind	100	127.9	2153	139.6	2216	151.7	2276	--	--
Medium-Final									
1/4" ice, no wind	32	137.1	--	149.5	--	162.1	--	175.2	--
No ice, no wind	60	119.2	2301	130.3	2382	141.5	2442	153.0	2509
No ice, no wind	100	124.0	2209	135.3	2281	146.6	2351	158.5	2419
Light-Final									
No ice, no wind	60	117.8	2323	128.8	2395	139.9	2467	151.1	2535
No ice, no wind	100	122.6	2231	133.8	2304	145.1	2376	156.6	2447

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	152.6	2773	164.3	2840	177.1	2907
No ice, no wind	20	155.3	2732	167.2	2797	179.9	2864
No ice, no wind	40	158.0	2688	169.9	2755	182.6	2821
No ice, no wind	60	160.5	2646	172.5	2714	185.4	2780
No ice, no wind	80	163.3	2603	175.4	2672	188.2	2739
No ice, no wind	100	166.1	2561	178.3	2629	191.2	2697
Heavy-Final							
1/2" ice, no wind	32	--	--	--	--	--	--
No ice, no wind	60	--	--	--	--	--	--
No ice, no wind	100	--.8	--	--	--	--	--
Medium-Final							
1/4" ice, no wind	32	188.8	--	203.0	—	218.3	--
No ice, no wind	60	165.1	2584	177.6	2637	191.0	2699
No ice, no wind	100	166.7	2486	183.5	2551	197.3	2615
Light-Final							
No ice, no wind	60	163.0	2603	175.2	2668	188.4	2732
No ice, no wind	100	164.6	2516	181.2	2584	194.5	2650

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	12.1	1625	17.7	1722	24.4	1818	31.8	1912
No ice, no wind	20	12.7	1554	18.5	1654	25.3	1754	32.8	1852
No ice, no wind	40	13.3	1482	19.3	1588	26.2	1692	33.8	1793
No ice, no wind	60	13.9	1415	20.1	1525	27.2	1632	34.9	1735
No ice, no wind	80	14.8	1348	21.0	1461	28.3	1570	36.1	1678
No ice, no wind	100	15.6	1283	22.0	1398	29.3	1511	37.3	1621
Heavy-Final									
1/2" ice, no wind	32	20.6	--	29.2	--	38.8	--	45.1	--
No ice, no wind	60	14.5	1371	20.8	1474	28.1	1576	36.1	1677
No ice, no wind	100	16.1	1232	22.9	1343	30.5	1453	38.9	1563
Medium-Final									
1/4" ice, no wind	32	17.0	--	24.0	--	32.0	--	40.6	--
No ice, no wind	60	14.4	1388	20.6	1496	27.8	1601	35.7	1703
No ice, no wind	100	16.0	1251	22.7	1365	30.2	1477	38.5	1584
Light-Final									
No ice, no wind	60	14.2	1399	20.4	1506	27.6	1612	35.4	1716
No ice, no wind	100	15.8	1261	22.4	1377	29.8	1489	38.0	1599

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	39.6	2005	48.1	2097	57.1	2189	66.4	2279
No ice, no wind	20	40.8	1949	49.4	2043	58.5	2137	67.9	2229
No ice, no wind	40	42.0	1892	50.7	1988	60.0	2085	69.5	2179
No ice, no wind	60	43.2	1837	52.1	1934	61.5	2033	71.1	2130
No ice, no wind	80	44.5	1782	53.5	1882	63.0	1982	72.7	2080
No ice, no wind	100	45.8	1731	55.0	1833	64.6	1934	74.5	2033
Heavy-Final									
1/2" ice, no wind	32	60.1	--	71.7	--	84.0	--	96.7	--
No ice, no wind	60	44.8	1776	54.0	1871	63.8	1963	74.0	2053
No ice, no wind	100	47.8	1670	57.4	1772	67.4	1871	77.8	1964
Medium-Final									
1/4" ice, no wind	32	50.0	--	59.9	--	70.5	--	81.4	--
No ice, no wind	60	44.2	1802	53.2	1900	62.7	1995	72.6	2089
No ice, no wind	100	47.2	1691	56.6	1795	66.3	1894	76.4	1990
Light-Final									
No ice, no wind	60	43.8	1817	52.8	1916	62.2	2012	72.0	2104

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	75.9	2369	85.9	2457	96.2	2545	107.0	2629
No ice, no wind	20	77.5	2321	87.6	2410	98.0	2498	108.7	2583
No ice, no wind	40	79.3	2273	89.4	2363	100.0	2452	110.8	2536
No ice, no wind	60	81.1	2224	91.3	2315	102.0	2406	113.0	2492
No ice, no wind	80	82.8	2175	93.2	2268	104.0	2359	115.2	2446
No ice, no wind	100	84.8	2128	95.2	2221	106.3	2312	117.5	2400
Heavy-Final									
1/2" ice, no wind	32	109.9	--	123.5	--	137.5	3529	--	--
No ice, no wind	60	84.6	2140	95.5	2222	106.8	2300	--	--
No ice, no wind	100	88.5	2050	99.7	2134	111.0	2210	--	--
Medium-Final									
1/4" ice, no wind	32	92.6	--	104.3	--	118.4	2958	129.0	--
No ice, no wind	60	82.9	2179	93.5	2267	104.3	2355	115.6	2438
No ice, no wind	100	86.8	2082	97.6	2172	108.6	2259	120.1	2342
Light-Final									
No ice, no wind	60	82.1	2196	92.6	2285	103.3	2373	114.3	2457
No ice, no wind	100	85.9	2099	96.5	2189	107.6	2278	119.1	2363

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	118.0	2712	129.4	2793	141.1	2871	153.2	2947
No ice, no wind	20	120.0	2666	131.3	2748	143.5	2825	155.8	2903
No ice, no wind	40	122.2	2620	133.9	2703	145.9	2781	158.2	2859
No ice, no wind	60	124.5	2576	136.2	2659	148.3	2738	160.5	2817
No ice, no wind	80	126.7	2531	138.5	2614	150.7	2695	162.9	2775
No ice, no wind	100	129.1	2486	141.0	2571	153.1	2653	165.5	2735
-Final									
², no wind	32	142.0	--	155.5	--	169.7	--	184.7	--
no wind	60	127.4	2519	139.4	2598	151.9	2674	164.8	2746
no wind	100	132.0	2422	144.4	2502	157.1	2580	170.3	2657
		142.0	--	155.5	--	169.7	--	184.7	--
		127.4	2519	139.4	2598	151.9	2674	164.8	2746
		132.0	2422	144.4	2502	157.1	2580	170.3	2657
	50	125.8	2539	137.6	2619	150.0	2697	162.5	2774

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length	Temp. °F	500-ft. Sag in Inches	500-ft. Tension in Pounds
Initial			
No ice, no wind	0	165.7	3023
No ice, no wind	20	168.0	2979
No ice, no wind	40	170.5	2937
No ice, no wind	60	173.0	2896
No ice, no wind	80	175.6	2855
No ice, no wind	100	178.1	2815
Medium-Final			
1/4" ice, no wind	32	200.9	3576
No ice, no wind	60	178.0	2816
No ice, no wind	100	183.6	2733
Light-Final			
No ice, no wind	60	175.7	2850
No ice, no wind	100	181.3	2767

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
		Sag	Tension	Sag	Tension	Sag	Tension	Sag	Tension
	Temp. °F	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds
Initial									
No ice, no wind	0	13.6	1682	19.7	1793	26.9	1903	34.8	2012
No ice, no wind	20	14.2	1613	20.5	1727	27.8	1841	35.8	1953
No ice, no wind	40	14.8	1547	21.3	1665	28.7	1782	36.9	1897
No ice, no wind	60	15.4	1483	22.1	1605	29.7	1725	38.1	1844
No ice, no wind	80	16.1	1418	23.0	1544	30.8	1669	39.2	1789
No ice, no wind	100	16.9	1353	24.1	1483	32.0	1611	40.4	1735
Heavy-Final									
1/2" ice, no wind	32	21.8	--	30.6	--	40.6	--	51.4	--
No ice, no wind	60	16.0	1438	22.7	1556	30.8	1673	39.3	1787
No ice, no wind	100	17.4	1309	24.6	1433	32.9	1556	41.7	1676
Medium-Final									
1/4" ice, no wind	32	18.2	--	25.8	--	34.4	--	43.8	--
No ice, no wind	60	15.8	1457	22.5	1579	30.3	1698	38.7	1813
No ice, no wind	100	17.2	1326	24.4	1453	32.5	1578	41.1	1699
Light-Final									
No ice, no wind	60	15.6	1466	22.3	1589	30.0	1708	38.4	1823
No ice, no wind	100	17.2	1334	24.4	1462	32.2	1588	40.8	1711

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	43.2	2120	52.2	2225	61.8	2329	71.7	2431
No ice, no wind	20	44.4	2064	53.5	2171	63.2	2277	73.2	2381
No ice, no wind	40	45.6	2010	54.9	2120	64.7	2227	74.8	2333
No ice, no wind	60	46.8	1960	56.2	2071	66.1	2180	76.3	2286
No ice, no wind	80	48.1	1907	57.5	2020	67.5	2130	77.9	2239
No ice, no wind	100	49.4	1854	58.9	1970	68.9	2082	79.4	2192
Heavy-Final									
1/2" ice, no wind	32	62.9	--	75.1	--	88.0	--	101.3	--
No ice, no wind	60	48.4	1899	58.2	2005	68.4	2109	79.0	2208
No ice, no wind	100	51.1	1793	61.2	1904	71.8	2012	82.8	2116
Medium-Final									
1/4" ice, no wind	32	54.0	--	64.6	--	76.0	--	87.7	--
No ice, no wind	60	47.6	1924	57.1	2033	67.3	2140	77.7	2244
No ice, no wind	100	50.5	1816	60.3	1928	70.6	2038	81.3	2145
Light-Final									
No ice, no wind	60	47.3	1936	56.8	2046	66.8	2155	77.1	2262
No ice, no wind	100	50.2	1826	59.7	1945	70.0	2056	80.5	2163

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	82.0	2532	92.6	2630	103.4	2727	114.8	2819
No ice, no wind	20	83.6	2483	94.3	2583	105.2	2681	116.7	2775
No ice, no wind	40	85.3	2436	96.0	2537	107.0	2636	118.5	2731
No ice, no wind	60	86.9	2390	97.7	2494	108.8	2592	120.4	2687
No ice, no wind	80	88.5	2344	99.5	2447	110.8	2547	122.3	2644
No ice, no wind	100	90.1	2299	101.2	2402	112.7	2502	124.2	2600
Heavy-Final									
1/2" ice, no wind	32	114.9	--	129.0	--	143.6	--		
No ice, no wind	60	89.9	2303	101.5	2392	113.8	2477		
No ice, no wind	100	94.1	2213	105.8	2306	117.8	2393		
Medium-Final									
1/4" ice, no wind	32	99.7	--	112.1	--	124.9	--	138.2	--
No ice, no wind	60	88.6	2345	99.8	2443	111.2	2540	123.1	2632
No ice, no wind	100	92.3	2249	103.7	2349	115.2	2447	127.5	2541
Light-Final									
No ice, no wind	60	87.7	2366	98.7	2466	110.1	2564	121.7	2659
No ice, no wind	100	91.4	2266	102.7	2367	114.1	2468	126.1	2564

Span Length		400-ft.		425-ft.		450-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	126.6	2909	138.7	2998	151.4	3088
No ice, no wind	20	128.6	2866	140.8	2956	153.5	3046
No ice, no wind	40	130.5	2824	142.9	2914	155.6	3004
No ice, no wind	60	132.5	2782	145.0	2872	157.9	2962
No ice, no wind	80	134.5	2740	147.1	2830	160.2	2921
No ice, no wind	100	136.5	2696	149.2	2788	162.5	2878
Medium-Final							
1/4" ice, no wind	32	152.0	--	166.3	--	181.1	--
No ice, no wind	60	135.3	2720	148.3	2813	162.0	2886
No ice, no wind	100	140.2	2632	153.4	2719	166.9	2803
Light-Final							
No ice, no wind	60	134.1	2750	146.9	2838	160.1	2922
No ice, no wind	100	138.7	2657	151.5	2747	164.8	2834

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
160 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	14.8	1742	21.4	1867	29.0	1992	37.4	2114
No ice, no wind	20	15.4	1676	22.2	1804	29.9	1933	38.3	2058
No ice, no wind	40	16.0	1610	22.9	1742	30.8	1874	39.4	2002
No ice, no wind	60	16.7	1547	23.7	1684	31.7	1818	40.4	1950
No ice, no wind	80	17.4	1484	24.7	1628	32.8	1766	41.6	1900
No ice, no wind	100	18.1	1425	25.7	1572	33.9	1711	43.0	1848
Heavy-Final									
1/2" ice, no wind	32	22.9	--	32.1	--	42.4	--	53.6	--
No ice, no wind	60	17.2	1502	24.5	1636	32.8	1766	41.8	1893
No ice, no wind	100	17.7	1385	26.5	1523	34.9	1659	44.2	1792
Medium-Final									
1/4" ice, no wind	32	19.2	--	27.1	--	36.0	--	45.7	--
No ice, no wind	60	17.0	1522	24.3	1658	32.4	1790	41.3	1919
No ice, no wind	100	18.6	1399	26.3	1539	34.4	1674	43.6	1807
Light-Final									
No ice, no wind	60	16.9	1531	24.0	1668	32.1	1802	40.9	1932
No ice, no wind	100	18.5	1407	26.0	1548	34.2	1687	43.4	1821

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	46.4	2235	55.7	2353	65.8	2470	76.3	2582
No ice, no wind	20	47.4	2183	56.9	2302	67.1	2419	77.7	2533
No ice, no wind	40	48.6	2130	58.2	2252	68.5	2371	79.2	2487
No ice, no wind	60	49.8	2080	59.5	2202	69.9	2323	80.7	2440
No ice, no wind	80	51.1	2030	61.0	2153	71.5	2275	82.3	2394
No ice, no wind	100	52.6	1982	62.8	2109	73.4	2231	84.2	2348
Heavy-Final									
1/2" ice, no wind	32	65.6	--	78.0	--	85.7	--	105.0	--
No ice, no wind	60	51.5	2017	61.8	2134	72.7	2249	84.0	2358
No ice, no wind	100	54.2	1920	64.6	2040	75.6	2156	87.1	2265
Medium-Final									
1/4" ice, no wind	32	56.1	--	67.1	--	78.8	--	90.9	--
No ice, no wind	60	50.7	2042	60.8	2162	71.3	2279	82.3	2394
No ice, no wind	100	53.2	1935	63.4	2061	74.31	2181	85.7	2298
Light-Final									
No ice, no wind	60	50.3	2058	60.3	2180	70.7	2298	81.6	2413
No ice, no wind	100	52.9	1953	63.2	2079	73.9	2201	85.0	2320

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
160 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	87.1	2692	98.3	2799	109.9	2902	121.8	3005
No ice, no wind	20	88.6	2644	99.9	2752	111.5	2857	123.6	2961
No ice, no wind	40	90.1	2600	101.6	2708	113.2	2815	125.5	2919
No ice, no wind	60	91.8	2555	103.3	2664	115.0	2772	127.5	2876
No ice, no wind	80	93.6	2510	105.0	2622	116.9	2730	129.5	2835
No ice, no wind	100	95.5	2465	106.9	2577	119.0	2687	131.4	2793
Heavy-Final									
1/2" ice, no wind	32	119.2	--						
No ice, no wind	60	95.6	2461						
No ice, no wind	100	98.9	2370						
Medium-Final									
1/4" ice, no wind	32	103.4	--	116.3	--	129.7	--	143.5	--
No ice, no wind	60	93.7	2507	105.5	2612	117.6	2715	130.3	2815
No ice, no wind	100	97.2	2415	109.2	2524	121.5	2630	134.4	2731
Light-Final									
No ice, no wind	60	92.7	2528	104.4	2636	116.4	2741	129.0	2843
No ice, no wind	100	96.4	2437	108.2	2547	120.4	2655	133.2	2757

Span Length		400-ft.		425-ft.		450-ft.	
Initial							
No ice, no wind	0	134.5	3107	147.2	3205	160.5	3304
No ice, no wind	20	136.2	3064	149.2	3165	162.7	3264
No ice, no wind	40	138.1	3023	151.1	3123	164.8	3224
No ice, no wind	60	140.2	2980	153.3	3082	166.9	3182
No ice, no wind	80	142.2	2938	155.5	3040	169.1	3140
No ice, no wind	100	144.2	2897	157.5	2999	171.1	3100
Medium-Final							
1/4" ice, no wind	32	157.9	--	172.5	--		
No ice, no wind	60	143.4	2911	156.9	3002		
No ice, no wind	100	147.8	2827	161.4	2918		
Light-Final							
No ice, no wind	60	142.0	2942	155.3	3037	169.1	3126
No ice, no wind	100	146.3	2856	159.9	2948	175.0	3036

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	16.1	1800	22.9	1944	30.9	2085	39.6	2221
No ice, no wind	20	16.6	1737	23.7	1884	31.8	2027	40.6	2166
No ice, no wind	40	17.2	1678	24.5	1826	32.8	1971	41.7	2114
No ice, no wind	60	17.9	1616	25.3	1768	33.7	1914	42.7	2060
No ice, no wind	80	18.6	1556	26.1	1710	34.6	1860	43.8	2008
No ice, no wind	100	19.3	1497	27.1	1654	35.7	1808	45.1	1957
Heavy-Final									
1/2" ice, no wind	32	23.9	--	33.2	--	43.7	--	55.1	--
No ice, no wind	60	18.5	1572	26.0	1719	34.6	1863	44.0	2003
No ice, no wind	100	19.9	1455	27.7	1606	36.6	1755	46.3	1899
Medium-Final									
1/4" ice, no wind	32	20.5	--	28.7	--	38.1	--	48.2	--
No ice, no wind	60	18.2	1591	25.6	1741	34.2	1886	43.4	2027
No ice, no wind	100	19.7	1471	27.4	1625	36.2	1776	45.7	1923
Light-Final									
No ice, no wind	60	18.1	1600	25.5	1749	34.0	1896	43.2	2039
No ice, no wind	100	19.6	1479	27.3	1633	36.0	1785	45.5	1934
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	49.0	2352	59.0	2479	69.7	2604	80.7	2724
No ice, no wind	20	50.1	2302	60.2	2433	71.0	2559	82.1	2680
No ice, no wind	40	51.2	2251	61.4	2384	72.4	2512	83.5	2635
No ice, no wind	60	52.4	2199	62.7	2334	73.7	2464	84.9	2590
No ice, no wind	80	53.7	2150	64.1	2287	75.1	2419	86.5	2545
No ice, no wind	100	55.0	2101	65.6	2241	76.6	2375	88.1	2501
Heavy-Final									
1/2" ice, no wind	32	67.4	--	80.4	--	94.3	--	109.0	--
No ice, no wind	60	54.2	2137	64.8	2264	76.2	2386	88.5	2498
No ice, no wind	100	56.7	2037	67.7	2169	79.3	2294	91.7	2410
Medium-Final									
1/4" ice, no wind	32	59.1	--	70.6	--	83.0	--	95.5	--
No ice, no wind	60	53.4	2165	63.9	2298	75.0	2426	86.6	2548
No ice, no wind	100	55.9	2065	66.6	2203	78.0	2335	89.8	2459
Light-Final									
No ice, no wind	60	53.0	2178	63.4	2312	74.5	2442	86.0	2565
No ice, no wind	100	55.6	2078	66.2	2216	77.4	2351	89.1	2476

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	92.3	2843	103.1	2961	116.0	3076	128.7	3186
No ice, no wind	20	93.7	2800	105.5	2917	117.6	3032	130.5	3143
No ice, no wind	40	95.1	2755	107.1	2874	119.2	2990	132.2	3102
No ice, no wind	60	96.5	2711	108.7	2831	120.8	2948	133.9	3062
No ice, no wind	80	98.1	2668	110.3	2788	122.6	2905	135.6	3016
No ice, no wind	100	99.7	2626	111.9	2745	124.4	2863	137.4	2974
Heavy-Final									
1/2" ice, no wind	32	108.7	--	122.2	--	136.1	--	150.6	--
No ice, no wind	60	98.5	2664	110.8	2776	123.5	2886	136.7	2994
No ice, no wind	100	101.9	2579	114.3	2694	127.1	2801	140.5	2902
Medium-Final									
1/4" ice, no wind	32	108.7	--	122.2	--	136.1	--	150.6	--
No ice, no wind	60	98.5	2664	110.8	2776	123.5	2886	136.7	2994
No ice, no wind	100	101.9	2579	114.3	2694	127.1	2801	140.5	2902
Light-Final									
No ice, no wind	60	97.7	2685	109.8	2802	122.3	2916	135.3	3027
No ice, no wind	100	101.0	2600	113.4	2717	126.1	2828	139.3	2932

Span Length		400-ft.		225-ft.	250-ft.	275-ft.
Initial						
No ice, no wind	0	142.3	3295			
No ice, no wind	20	144.1	3250			
No ice, no wind	40	145.8	3211			
No ice, no wind	60	147.6	3171			
No ice, no wind	80	149.4	3126			
No ice, no wind	100	151.2	3085			
Light-Final						
No ice, no wind	60	149.1	3132			
No ice, no wind	100	153.3	3030			

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	17.0	1861	24.5	2011	33.1	2160	42.3	2307
No ice, no wind	20	17.6	1799	25.2	1954	34.0	2108	43.2	2257
No ice, no wind	40	18.2	1738	26.0	1897	34.9	2054	44.2	2207
No ice, no wind	60	19.0	1680	26.8	1843	35.8	2002	45.2	2158
No ice, no wind	80	19.7	1622	27.7	1789	36.7	1952	46.3	2110
No ice, no wind	100	20.4	1566	28.6	1736	37.7	1902	47.4	2062
Heavy-Final									
1/2" ice, no wind	32	25.1	--	35.1	--	46.2	--	47.9	--
No ice, no wind	60	19.4	1637	28.0	1794	37.0	1946	46.8	2097
No ice, no wind	100	21.0	1524	29.6	1689	39.0	1849	48.89	2002
Medium-Final									
1/4" ice, no wind	32	21.8	--	30.8	--	41.0	--	51.6	--
No ice, no wind	60	19.2	1656	27.4	1818	36.4	1976	46.1	2129
No ice, no wind	100	20.8	1538	29.1	1709	38.5	1874	48.3	2031
Light-Final									
No ice, no wind	60	19.1	1667	27.3	1828	36.2	1986	45.7	2140
No ice, no wind	100	20.6	1548	28.9	1717	38.2	1882	48.0	2042

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	52.2	2452	62.7	2593	73.6	2730	84.9	2862
No ice, no wind	20	53.2	2406	63.8	2549	74.9	2686	86.3	2820
No ice, no wind	40	54.2	2358	65.0	2504	76.2	2642	87.7	2776
No ice, no wind	60	55.4	2311	66.2	2457	77.5	2596	89.2	2732
No ice, no wind	80	56.6	2264	67.5	2411	78.9	2551	90.7	2688
No ice, no wind	100	57.8	2218	68.9	2365	80.3	2506	92.2	2645
Heavy-Final									
1/2" ice, no wind	32	70.6	--	83.5	--	97.4	--	111.9	--
No ice, no wind	60	57.2	2242	68.2	2378	79.9	2509	92.2	2631
No ice, no wind	100	59.6	2150	70.9	2289	82.7	2423	95.3	2546
Medium-Final									
1/4" ice, no wind	32	62.9	--	75.0	--	87.6	--	100.6	--
No ice, no wind	60	56.3	2276	67.4	2414	78.9	2549	90.8	2681
No ice, no wind	100	58.8	2182	70.2	2324	81.8	2463	93.8	2598
Light-Final									
No ice, no wind	60	55.9	2289	66.7	2433	78.0	2571	89.8	2704
No ice, no wind	100	58.4	2196	69.5	2339	81.0	2478	93.0	2614

TABLE I

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	96.5	2993	108.8	3116	121.7	3239
No ice, no wind	20	97.8	2951	110.2	3077	123.1	3199
No ice, no wind	40	99.4	2907	111.7	3033	124.8	3156
No ice, no wind	60	100.9	2864	113.4	2991	126.6	3116
No ice, no wind	80	102.5	2821	115.0	2950	128.4	3076
No ice, no wind	100	104.0	2780	116.6	2908	130.2	3033
Medium-Final							
1/4" ice, no wind	32	114.0	--	128.0	--	143.0	--
No ice, no wind	60	102.8	2813	115.6	2933	129.5	3049
No ice, no wind	100	106.1	2727	119.1	2849	133.2	2966
Light-Final							
No ice, no wind	60	120.0	2834	114.4	2958	127.9	3083
No ice, no wind	100	105.2	2747	117.8	2875	131.6	2996

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	3.7	2503	6.3	2524	9.3	2547	12.4	2571
No ice, no wind	20	3.8	2355	6.6	2379	9.8	2405	13.1	2433
No ice, no wind	40	4.1	2200	7.1	2229	10.4	2260	14.0	2293
No ice, no wind	60	4.4	2046	7.6	2079	11.1	2115	14.8	2151
No ice, no wind	80	4.8	1891	8.2	1929	12.0	1968	15.7	2008
No ice, no wind	100	5.3	1733	8.9	1776	12.9	1819	16.9	1863
Heavy-Final									
1/2" ice, no wind	32	9.7	--	15.7	--	22.0	--	28.6	--
No ice, no wind	60	4.7	1962	8.0	1987	11.9	2015	15.8	2043
No ice, no wind	100	5.6	1626	9.6	1665	13.8	1706	18.2	1746
Medium-Final									
1/4" ice, no wind	32	6.5	--	11.3	--	15.9	--	20.8	--
No ice, no wind	60	4.6	1995	7.8	2023	11.6	2054	15.4	2086
No ice, no wind	100	5.5	1655	9.3	1697	13.5	1739	17.7	1782
Light-Final									
No ice, no wind	60	4.4	2013	7.6	2043	11.2	2073	15.0	2105
No ice, no wind	100	5.4	1667	9.1	1710	13.2	1754	17.4	1798

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	15.7	2596	19.2	2622	23.0	2648	27.1	2674
No ice, no wind	20	16.6	2461	20.3	2489	24.3	2518	28.5	2547
No ice, no wind	40	17.6	2323	21.5	2355	25.7	2386	30.1	2419
No ice, no wind	60	18.6	2185	22.7	2221	27.1	2256	31.7	2291
No ice, no wind	80	19.8	2047	24.0	2087	28.6	2125	33.4	2163
No ice, no wind	100	21.1	1907	25.5	1951	30.3	1995	35.3	2038
Heavy-Final									
1/2" ice, no wind	32	35.3	--	42.2	--	49.4	--	56.9	--
No ice, no wind	60	19.9	2074	24.2	2103	28.9	2135	33.7	2165
No ice, no wind	100	22.7	1787	27.5	1827	32.6	1867	37.9	1907
Medium-Final									
1/4" ice, no wind	32	25.9	--	31.3	--	37.1	--	43.0	--
No ice, no wind	60	19.5	2118	23.6	2151	28.2	2183	33.0	2217
No ice, no wind	100	22.2	1825	26.9	1867	31.8	1910	37.1	1953
Light-Final									
No ice, no wind	60	18.9	2138	23.1	2171	27.7	2206	32.4	2239
No ice, no wind	100	21.8	1844	26.4	1886	31.3	1929	36.6	1974

TABLE II

Initial Sags and Tensions with Cable in Place, and Final Sags for Ground Clearance Determination of 5/16" (7-wire) Extra High Strength Galvanized Steel Messenger Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable 0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	31.3	2700	35.9	2727	40.4	2758	45.5	2787
No ice, no wind	20	33.0	2578	37.7	2607	42.5	2640	47.7	2674
No ice, no wind	40	34.7	2453	39.5	2486	44.5	2520	49.9	2558
No ice, no wind	60	36.6	2327	41.6	2365	46.7	2401	52.4	2443
No ice, no wind	80	38.5	2203	43.7	2244	49.0	2283	54.8	2329
No ice, no wind	100	40.6	2082	46.1	2126	51.6	2170	57.4	2215
Heavy-Final									
1/2" ice, no wind	32	64.6	--	73.0	--	82.0	--	91.6	--
No ice, no wind	60	38.9	2196	44.2	2228	49.6	2260	56.0	2298
No ice, no wind	100	43.5	1947	49.4	1987	55.3	2028	62.0	2072
Medium-Final									
1/4" ice, no wind	32	49.3	--	56.1	--	63.0	--	70.7	--
No ice, no wind	60	37.9	2251	43.0	2285	48.4	2319	54.7	2356
No ice, no wind	100	42.5	1996	48.2	2038	53.9	2081	60.5	2127
Light-Final									
No ice, no wind	60	37.3	2273	42.5	2309	47.9	2344	54.0	2382
No ice, no wind	100	42.0	2017	47.6	2061	53.4	2105	59.8	2152
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	51.3	2820	57.4	2853	63.8	2885	70.5	2918
No ice, no wind	20	53.6	2709	59.8	2743	66.3	2776	73.0	2810
No ice, no wind	40	55.9	2596	62.2	2633	68.8	2664	75.5	2705
No ice, no wind	60	58.4	2484	64.8	2524	71.6	2563	79.1	2602
No ice, no wind	80	60.9	2372	67.6	2414	73.6	2455	81.9	2493
No ice, no wind	100	63.7	2260	70.6	2305	77.7	2350	85.2	2394
Heavy-Final									
1/2" ice, no wind	32	101.1	--	111.0	--	121.2	--	131.9	--
No ice, no wind	60	62.9	2337	69.9	2374	77.1	2409	84.6	2444
No ice, no wind	100	69.3	2116	76.7	2159	84.2	2201	92.1	2243
Medium-Final									
1/4" ice, no wind	32	78.8	--	87.0	--	95.5	--	104.2	--
No ice, no wind	60	61.3	2394	68.0	2432	74.9	2469	82.1	2507
No ice, no wind	100	67.5	2173	74.6	2217	81.8	2260	89.4	2301
nal									
no wind	60	60.5	2421	67.0	2460	73.9	2498	81.0	2536
no wind	100	66.6	2198	73.6	2243	80.8	2287	88.2	2329

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	77.4	2951	84.4	2983	91.7	3016	99.1	3049
No ice, no wind	20	80.2	2844	87.4	2879	94.7	2913	102.4	2947
No ice, no wind	40	83.1	2740	90.5	2778	98.1	2814	105.9	2849
No ice, no wind	60	86.3	2639	93.9	2678	101.5	2716	109.6	2754
No ice, no wind	80	89.5	2537	97.3	2578	105.1	2618	113.3	2659
No ice, no wind	100	93.0	2437	100.9	2479	109.0	2522	117.5	2565
Heavy-Final									
1/2" ice, no wind	32	142.8	--	154.1	--	165.5	--	177.3	--
No ice, no wind	60	92.4	2478	100.5	2512	108.9	2545	117.5	2579
No ice, no wind	100	100.3	2284	108.8	2325	117.5	2364	126.5	2403
Medium-Final									
1/4" ice, no wind	32	113.3	--	122.7	--	132.4	--	142.2	--
No ice, no wind	60	89.6	2544	97.4	2581	105.4	2618	133.7	2655
No ice, no wind	100	97.3	2344	105.5	2386	114.0	2427	122.6	2467
Light-Final									
No ice, no wind	60	88.4	2574	96.2	2611	104.2	2648	112.4	2685
No ice, no wind	100	96.1	2372	104.1	2414	112.5	2455	121.0	2497

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	106.8	3082	114.5	3115	122.4	3149	130.4	3179
No ice, no wind	20	110.3	2982	118.1	3016	126.0	3051	134.2	3084
No ice, no wind	40	114.0	2886	122.1	2918	130.2	2955	138.6	2988
No ice, no wind	60	117.9	2791	126.1	2827	134.4	2865	142.9	2901
No ice, no wind	80	121.8	2697	130.3	2736	138.8	2776	147.4	2815
No ice, no wind	100	126.0	2608	134.7	2651	143.4	2692	152.1	2731
Heavy-Final									
1/2" ice, no wind	32	189.2	--	201.3	--	213.6	--	226.0	--
No ice, no wind	60	126.1	2613	135.0	2646	144.0	2677	153.5	2709
No ice, no wind	100	135.5	2441	144.8	2479	154.2	2515	164.1	2552
Medium-Final									
1/4" ice, no wind	32	152.2	--	162.4	--	172.8	--	183.2	--
No ice, no wind	60	122.0	2691	130.5	2726	139.2	2762	148.2	2797
No ice, no wind	100	131.4	2509	140.3	2549	149.4	2590	158.8	2628
Light-Final									
No ice, no wind	60	120.7	2723	129.3	2759	138.0	2795	146.7	2831
No ice, no wind	100	129.7	2537	138.6	2577	147.6	2618	156.8	2657

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	138.7	3210	147.3	3241	156.2	3272	165.5	3303
No ice, no wind	20	142.7	3117	151.5	3150	160.6	3183	170.0	3217
No ice, no wind	40	147.1	3023	156.0	3058	165.2	3093	174.7	3128
No ice, no wind	60	151.5	2937	160.5	2974	169.8	3011	179.5	3047
No ice, no wind	80	156.1	2853	165.2	2891	174.7	2929	184.5	2966
No ice, no wind	100	161.0	2771	170.2	2809	179.8	2847	189.7	2885
Heavy-Final									
1/2" ice, no wind	32	238.7	--	251.9	--	265.5	--	279.4	--
No ice, no wind	60	163.3	2739	173.3	2769	183.5	2797	194.1	2826
No ice, no wind	100	174.1	2586	184.3	2620	194.7	2653	205.4	2683
Medium-Final									
1/4" ice, no wind	32	194.2	--	205.2	--	216.5	--	227.9	--
No ice, no wind	60	157.5	2832	167.2	2867	176.1	2902	187.3	2936
No ice, no wind	100	168.4	2666	178.3	2704	188.4	2741	198.7	2777
Light-Final									
No ice, no wind	60	155.8	2867	165.4	2903	174.5	2939	185.2	2974
No ice, no wind	100	166.3	2697	176.1	2736	186.0	2774	196.2	2811
Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	175.1	3335	184.7	3366	194.6	3397	204.7	3429
No ice, no wind	20	179.7	3251	189.6	3284	199.7	3317	209.9	3351
No ice, no wind	40	184.6	3167	194.6	3201	204.7	3235	215.1	3265
No ice, no wind	60	189.5	3085	199.6	3120	209.9	3154	220.6	3189
No ice, no wind	80	194.6	3004	205.0	3040	215.5	3076	226.2	3115
No ice, no wind	100	199.9	2923	210.4	2961	221.1	2998	232.0	3035
Heavy-Final									
1/2" ice, no wind	32	293.8	--	308.3	--	321.1	--	338.2	--
No ice, no wind	60	205.0	2854	216.4	2882	227.9	2910	239.8	2935
No ice, no wind	100	216.4	2713	227.8	2742	239.7	2770	251.8	2796
Medium-Final									
1/4" ice, no wind	32	239.4	--	251.2	--	263.1	--	275.3	--
No ice, no wind	60	197.6	2971	208.1	3004	218.8	3037	229.6	3069
No ice, no wind	100	209.2	2813	219.9	2849	230.6	2885	241.6	2918
Light-Final									
No ice, no wind	60	195.3	3009	205.7	3044	216.1	3077	226.7	3111
No ice, no wind	100	206.6	2849	217.1	2885	227.7	2922	238.5	2957

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telehphone Cable
0.40 Pounds per foot with Diameter 0.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	214.8	3461
No ice, no wind	20	220.2	3382
No ice, no wind	40	225.6	3302
No ice, no wind	60	231.0	3223
No ice, no wind	80	237.0	3147
No ice, no wind	100	243.0	3071
Heavy-Final			
1/2" ice, no wind	32	353.4	--
No ice, no wind	60	252.0	2961
No ice, no wind	100	264.0	2822
Medium-Final			
1/4" ice, no wind	32	288.0	--
No ice, no wind	60	240.6	3101
No ice, no wind	100	252.6	2952
Light-Final			
No ice, no wind	60	237.6	3143
No ice, no wind	100	249.6	2991

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	4.7	2533	7.6	2571	11.0	2610	14.6	2648
No ice, no wind	20	4.9	2390	8.0	2432	11.6	2475	15.5	2520
No ice, no wind	40	5.3	2240	8.6	2287	12.3	2336	17.3	2386
No ice, no wind	60	5.7	2089	9.2	2142	13.2	2197	14.8	2250
No ice, no wind	80	6.2	1941	9.9	1999	14.2	2057	15.7	2116
No ice, no wind	100	6.7	1790	10.7	1853	15.2	1916	16.9	1980
Heavy-Final									
1/2" ice, no wind	32	11.1	--	17.2	--	23.8	--	30.9	--
No ice, no wind	60	6.0	2007	9.8	2051	14.1	2098	18.3	2145
No ice, no wind	100	7.1	1687	11.1	1745	16.2	1806	21.1	1862
Medium-Final									
1/4" ice, no wind	32	7.9	--	12.9	--	17.9	--	23.4	--
No ice, no wind	60	5.9	2038	9.5	2086	13.8	2136	18.2	2186
No ice, no wind	100	7.3	1718	11.2	1777	15.8	1839	20.4	1898
Light-Final									
No ice, no wind	60	5.7	2056	9.3	2105	13.4	2155	17.8	2205
No ice, no wind	100	6.9	1728	10.6	1791	15.5	1855	20.3	1919

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	18.6	2691	23.0	2734	27.7	2776	32.6	2818
No ice, no wind	20	19.7	2565	24.2	2609	29.1	2655	34.2	2700
No ice, no wind	40	20.8	2434	25.5	2483	30.6	2531	35.8	2581
No ice, no wind	60	22.0	2303	26.9	2356	32.1	2409	37.6	2461
No ice, no wind	80	23.3	2173	28.4	2231	33.7	2286	39.3	2342
No ice, no wind	100	24.8	2042	29.9	2105	35.4	2166	41.2	2226
Heavy-Final									
1/2" ice, no wind	32	38.1	--	45.7	--	53.7	--	61.9	--
No ice, no wind	60	23.1	2193	28.6	2240	34.1	2289	39.7	2337
No ice, no wind	100	26.4	1925	31.9	1983	37.8	2041	43.9	2099
Medium-Final									
1/4" ice, no wind	32	29.2	--	35.3	--	41.8	--	48.5	--
[illegible], no wind	60	23.0	2236	27.9	2287	33.3	2337	38.9	2390
[illegible] no wind	100	25.8	1963	31.2	2024	36.9	2084	42.9	2134
[illegible]al									
[illegible]o wind	60	22.4	2256	27.4	2307	32.8	2359	38.3	2410
[illegible]no wind	100	25.4	1982	30.7	2043	36.4	2104	42.45	2166

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	37.8	2861	43.4	2905	49.1	2952	55.1	2998
No ice, no wind	20	39.6	2747	45.3	2793	51.1	2842	57.3	2891
No ice, no wind	40	41.3	2631	47.1	2680	53.1	2730	59.5	2783
No ice, no wind	60	43.3	2514	49.2	2567	55.4	2619	62.0	2676
No ice, no wind	80	45.2	2398	51.3	2455	57.7	2510	64.4	2570
No ice, no wind	100	47.3	2287	53.6	2347	60.2	2406	66.8	2466
Heavy-Final									
1/2" ice, no wind	32	70.4	--	79.5	--	89.2	--	99.4	--
No ice, no wind	60	45.7	2385	52.0	2433	58.4	2481	65.6	2532
No ice, no wind	100	50.2	2156	57.0	2212	63.8	2268	71.3	2325
Medium-Final									
1/4" ice, no wind	32	55.6	--	63.1	--	71.0	--	79.4	--
No ice, no wind	60	44.6	2440	50.7	2490	57.3	2541	64.2	2593
No ice, no wind	100	49.2	2214	55.8	2261	62.5	2319	69.8	2379
Light-Final									
No ice, no wind	60	44.1	2462	50.2	2514	56.6	2565	63.5	2618
No ice, no wind	100	48.6	2226	55.1	2287	61.9	2344	69.0	2404

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	61.8	3046	68.7	3094	75.9	3141	83.5	3188
No ice, no wind	20	64.0	2941	71.1	2990	78.4	3038	86.0	3087
No ice, no wind	40	66.3	2835	73.5	2887	80.9	2934	88.6	2989
No ice, no wind	60	68.8	2731	76.1	2785	83.7	2839	91.9	2892
No ice, no wind	80	71.3	2657	78.8	2684	85.9	2739	94.7	2791
No ice, no wind	100	74.0	2524	81.6	2583	89.6	2641	97.8	2698
Heavy-Final									
1/2" ice, no wind	32	109.6	--	120.3	--	131.3	--	142.8	--
No ice, no wind	60	73.2	2584	81.0	2635	89.1	2683	97.5	2735
No ice, no wind	100	79.3	2383	87.5	2438	95.8	2492	104.6	2544
Medium-Final									
1/4" ice, no wind	32	88.1	--	97.1	--	106.4	--	115.9	--
No ice, no wind	60	71.6	2645	79.1	2697	86.9	2748	94.9	2800
No ice, no wind	100	77.5	2438	85.4	2496	93.5	2552	101.9	2607
Light-Final									
No ice, no wind	60	70.8	2672	78.1	2725	85.8	2777	93.7	2829
No ice, no wind	100	76.6	2464	84.4	2522	92.5	2579	100.7	2634

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	91.2	3236	99.2	3283	107.5	3331	115.9	3378
No ice, no wind	20	94.0	3136	102.2	3186	110.4	3234	119.1	3282
No ice, no wind	40	96.9	3039	105.2	3091	113.7	3141	122.5	3190
No ice, no wind	60	100.0	2944	108.5	2997	117.0	3049	126.0	3101
No ice, no wind	80	103.1	2848	111.7	2903	120.5	2957	129.6	3012
No ice, no wind	100	106.4	2755	115.2	2811	124.2	2867	133.5	2923
Heavy-Final									
1/2" ice, no wind	32	154.6	--	166.8	--	178.9	--	191.5	--
No ice, no wind	60	106.2	2779	115.2	2825	124.6	2870	134.3	2914
No ice, no wind	100	113.7	2597	123.0	2647	132.7	2697	142.6	2745
Medium-Final									
1/4" ice, no wind	32	125.8	--	135.0	--	146.5	--	157.2	--
No ice, no wind	60	103.3	2851	112.0	2901	120.7	2952	130.2	3002
No ice, no wind	100	110.6	2663	119.7	2718	129.1	2772	138.5	2825
Light-Final									
No ice, no wind	60	102.1	2881	110.7	2932	119.6	2982	128.7	3033
No ice, no wind	100	109.5	2691	118.3	2747	127.6	2801	136.9	2856

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	124.5	3424	133.1	3470	142.0	3517	151.1	3559
No ice, no wind	20	127.9	3331	136.7	3378	145.6	3425	154.8	3470
No ice, no wind	40	131.4	3240	140.5	3287	149.6	3336	158.9	3381
No ice, no wind	60	135.2	3151	144.3	3201	153.6	3251	163.0	3299
No ice, no wind	80	138.9	3063	148.4	3115	157.7	3167	167.2	3217
No ice, no wind	100	142.8	2979	152.4	3034	162.1	3087	171.7	3137
Heavy-Final									
1/2" ice, no wind	32	204.3	--	217.4	--	230.7	--	244.7	--
No ice, no wind	60	144.0	2958	154.1	2960	164.4	3040	175.9	3075
No ice, no wind	100	152.8	2792	163.2	2839	173.9	2885	185.6	2923
Medium-Final									
1/4" ice, no wind	32	168.0	--	179.1	--	190.4	--	201.7	--
No ice, no wind	60	139.4	3051	148.9	3099	158.6	3147	168.3	3192
No ice, no wind	100	148.2	2879	158.0	2931	168.0	2982	178.4	3030
ıal									
no wind	60	138.0	3084	147.4	3133	157.2	3181	166.8	3228
no wind	100	146.5	2908	156.2	2961	166.1	3013	176.1	3063

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	160.3	3602	169.8	3645	179.6	3687	189.8	3729
No ice, no wind	20	164.2	3515	173.9	3560	183.9	3604	194.2	3648
No ice, no wind	40	168.4	3426	178.2	3474	188.3	3519	198.7	3564
No ice, no wind	60	172.6	3346	182.5	3394	192.3	3441	203.3	3487
No ice, no wind	80	176.9	3266	187.0	3315	197.3	3363	208.0	3410
No ice, no wind	100	181.5	3188	191.7	3237	202.2	3286	213.0	3333
Heavy-Final									
1/2" ice, no wind	32	258.7	--	272.6	--	286.5	--	300.5	--
No ice, no wind	60	187.4	3110	198.9	3145	210.4	3180	221.9	3215
No ice, no wind	100	197.3	2961	209.0	2999	220.7	3038	232.4	3077
Medium-Final									
1/4" ice, no wind	32	213.6	--	225.5	--	237.7	--	250.2	--
No ice, no wind	60	179.2	3237	189.5	3281	199.6	3325	211.4	3368
No ice, no wind	100	188.7	3078	199.7	3126	210.8	3172	222.0	3217
Light-Final									
No ice, no wind	60	176.8	3275	186.9	3321	197.4	3367	208.7	3412
No ice, no wind	100	186.6	3113	197.1	3162	208.0	3210	218.3	3256

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	200.6	3775	211.0	3813	221.8	3855	232.8	3898
No ice, no wind	20	204.8	3692	215.7	3735	226.7	3779	237.8	3824
No ice, no wind	40	209.5	3612	220.4	3656	231.5	3701	242.7	3743
No ice, no wind	60	214.1	3534	225.2	3580	236.4	3624	247.9	3670
No ice, no wind	80	218.9	3458	230.2	3504	241.5	3550	253.0	3598
No ice, no wind	100	224.1	3381	235.4	3429	246.9	3475	258.5	3522
Heavy-Final									
1/2" ice, no wind	32	314.5	--						
No ice, no wind	60	233.3	3251						
No ice, no wind	100	244.1	3116						
Medium-Final									
1/4" ice, no wind	32	262.8	--	275.7	--	288.7	--	301.9	--
No ice, no wind	60	222.7	3417	234.3	3452	246.1	3493	257.9	3533
No ice, no wind	100	233.3	3262	245.1	3305	256.9	3347	269.0	3388
Light-Final									
No ice, no wind	60	219.8	3456	231.1	3500	242.5	3543	253.9	3588
No ice, no wind	100	230.3	3303	241.9	3348	253.7	3394	265.2	3438

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.60 Pounds per foot with Diameter 1.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	243.8	3941
No ice, no wind	20	249.0	3866
No ice, no wind	40	254.0	3790
No ice, no wind	60	259.2	3715
No ice, no wind	80	264.6	3642
No ice, no wind	100	270.2	3569
Medium-Final			
1/4" ice, no wind	32	315.4	--
No ice, no wind	60	269.8	3479
No ice, no wind	100	281.0	3343
Light-Final			
No ice, no wind	60	265.6	3601
No ice, no wind	100	277.2	3454

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	5.7	2563	8.9	2618	12.7	2673	16.8	2727
No ice, no wind	20	6.0	2425	9.4	2485	13.4	2545	17.9	2607
No ice, no wind	40	6.5	2280	10.1	2345	14.2	2412	19.6	2479
No ice, no wind	60	7.0	3132	10.8	2205	15.3	2279	20.2	2349
No ice, no wind	80	7.6	1991	11.6	2069	16.4	2146	21.2	2224
No ice, no wind	100	8.1	1847	12.5	1930	17.5	2013	22.7	2097
Heavy-Final									
1/2" ice, no wind	32	12.6	--	18.7	--	25.6	--	33.2	--
No ice, no wind	60	7.3	2052	11.6	2115	16.3	2181	20.8	2247
No ice, no wind	100	8.6	1748	12.6	1825	18.6	1906	24.0	1978
Medium-Final									
1/4" ice, no wind	32	9.3	--	14.5	--	19.9	--	26.0	--
No ice, no wind	60	7.2	2081	11.2	2149	16.0	2218	21.0	2286
No ice, no wind	100	9.1	1781	13.1	1857	18.1	1939	23.1	2014
Light-Final									
No ice, no wind	60	7.0	2099	11.0	2167	15.6	2237	20.6	2305
No ice, no wind	100	8.4	1789	12.1	1872	17.8	1956	23.2	2040

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	21.5	2786	26.8	2846	32.4	2904	38.1	2962
No ice, no wind	20	22.8	2669	28.1	2729	33.9	2792	39.9	2853
No ice, no wind	40	24.0	2545	29.5	2611	35.5	2676	41.5	2743
No ice, no wind	60	25.4	2421	31.1	2491	37.1	2562	43.5	2631
No ice, no wind	80	26.8	2299	32.8	2375	38.8	2447	45.2	2521
No ice, no wind	100	28.4	2177	34.3	2259	40.5	2337	47.1	2414
Heavy-Final									
1/2" ice, no wind	32	40.9	--	49.2	--	58.0	--	66.9	--
No ice, no wind	60	26.3	2312	33.0	2377	39.3	2443	45.7	2509
No ice, no wind	100	30.1	2063	36.3	2139	43.0	2215	49.9	2291
Medium-Final									
1/4" ice, no wind	32	32.5	--	39.3	--	46.5	--	54.0	--
No ice, no wind	60	26.5	2354	32.2	2423	38.4	2491	44.8	2562
No ice, no wind	100	29.4	2101	35.5	2181	42.0	2258	48.7	2315
Light-Final									
No ice, no wind	60	25.9	2374	31.7	2443	37.9	2512	44.2	1581
No ice, no wind	100	29.01	2120	35.0	2200	41.5	2279	448.2	2358

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	44.3	3022	50.9	3083	57.8	3136	64.7	3209
No ice, no wind	20	46.2	2916	52.9	2979	59.7	3044	66.9	3108
No ice, no wind	40	47.9	2809	54.7	2874	61.7	2940	69.1	3008
No ice, no wind	60	50.0	2701	56.8	2769	64.1	2837	71.6	2909
No ice, no wind	80	51.9	2593	58.9	2666	66.4	2737	74.0	2811
No ice, no wind	100	54.0	2492	61.1	2568	68.7	2642	76.2	2717
Heavy-Final									
1/2" ice, no wind	32	76.2	--	86.0	--	96.4	--	107.2	--
No ice, no wind	60	52.5	2574	59.8	2638	67.2	2702	75.2	2766
No ice, no wind	100	56.9	2365	64.6	2437	73.3	2508	80.6	2578
Medium-Final									
1/4" ice, no wind	32	61.9	--	70.1	--	79.0	--	88.1	--
No ice, no wind	60	51.3	2629	58.4	2695	66.0	2763	73.7	2830
No ice, no wind	100	55.9	2432	63.4	2484	71.1	2557	79.1	2631
Light-Final									
No ice, no wind	60	50.9	2651	57.9	2719	65.3	2786	73.0	2854
No ice, no wind	100	55.2	2435	62.6	2511	70.4	2583	78.2	2656
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	72.3	3272	80.0	3335	88.0	3397	96.5	3458
No ice, no wind	20	74.4	3173	82.4	3237	90.5	3300	99.0	3364
No ice, no wind	40	76.7	3074	84.8	3141	93.0	3204	101.7	3273
No ice, no wind	60	79.2	2978	87.4	3046	95.8	3115	104.7	3182
No ice, no wind	80	81.7	2912	90.0	2954	98.2	3023	107.5	3089
No ice, no wind	100	84.3	2788	92.6	2861	101.5	2932	110.4	3002
Heavy-Final									
1/2" ice, no wind	32	118.1	--	129.6	--	141.4	--	153.7	--
No ice, no wind	60	83.5	2831	92.1	2896	101.1	2957	110.4	3026
No ice, no wind	100	89.3	2650	98.3	2717	107.4	2783	117.1	2845
Medium-Final									
1/4" ice, no wind	32	97.4	--	107.2	--	117.3	--	127.6	--
No ice, no wind	60	81.9	2896	90.2	2962	98.9	3027	107.7	3093
No ice, no wind	100	87.5	2703	96.2	2775	105.2	2844	114.4	2913
ind	60	81.1	2923	89.2	2990	97.7	3056	106.4	3122
ind	100	86.61	2730	95.5	2801	104.2	2871	113.2	2939

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	105.0	3521	114.0	3583	123.3	3646	132.7	3707
No ice, no wind	20	107.8	3428	117.0	3493	126.1	3555	135.8	3617
No ice, no wind	40	110.7	3338	119.9	3404	129.3	3468	139.1	3531
No ice, no wind	60	113.7	3248	123.1	3316	132.5	3382	142.4	3448
No ice, no wind	80	116.7	3159	126.1	3228	135.9	3296	145.9	3365
No ice, no wind	100	119.8	3073	129.5	3143	139.4	3212	149.5	3281
Heavy-Final									
1/2" ice, no wind	32	166.4	--	179.4	--	192.3	--	205.7	--
No ice, no wind	60	120.0	3080	129.9	3138	140.3	3195	151.1	3249
No ice, no wind	100	127.1	2910	137.2	2969	147.9	3030	158.7	3087
Medium-Final									
1/4" ice, no wind	32	138.3	--	148.3	--	160.6	--	172.2	--
No ice, no wind	60	117.0	3158	126.6	3221	136.0	3286	146.7	3349
No ice, no wind	100	123.9	2982	133.9	3050	144.2	3117	154.4	3183
Light-Final									
No ice, no wind	60	115.8	3188	125.2	3253	135.0	3316	145.0	3381
No ice, no wind	100	122.9	3010	132.5	3079	142.7	3147	152.8	3215
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	142.2	3766	151.7	3825	161.6	3885	171.8	3939
No ice, no wind	20	145.5	3680	155.3	3740	165.2	3799	175.4	3856
No ice, no wind	40	148.8	3594	158.9	3656	169.0	3717	179.2	3774
No ice, no wind	60	152.5	3511	162.5	3575	172.8	3637	183.1	3697
No ice, no wind	80	156.0	3429	166.5	3494	176.6	3558	187.0	3619
No ice, no wind	100	159.6	3350	170.1	3417	180.8	3482	191.3	3443
Heavy-Final									
1/2" ice, no wind	32	219.4	--	233.5	--	247.8	--	262.4	--
No ice, no wind	60	161.9	3303	173.2	3314	184.8	3403	197.6	3443
No ice, no wind	100	170.1	3143	181.6	3199	193.6	3255	206.6	3299
Medium-Final									
1/4" ice, no wind	32	183.8	--	195.8	--	208.0	--	220.2	--
No ice, no wind	60	156.8	3411	167.3	3472	178.0	3532	188.4	3587
No ice, no wind	100	165.0	3249	175.7	3313	186.6	3374	198.0	3432
Light-Final									
No ice, no wind	60	155.3	3445	165.5	3507	176.4	3567	186.9	3625
No ice, no wind	100	163.3	3279	173.8	3345	184.6	3408	195.4	3469

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	181.9	3994	192.3	4049	203.0	4102	214.1	4155
No ice, no wind	20	185.7	3913	196.3	3970	207.2	4025	218.4	4079
No ice, no wind	40	189.7	3829	200.4	3890	211.4	3945	222.7	4000
No ice, no wind	60	193.7	3755	204.5	3814	215.6	3874	227.1	3927
No ice, no wind	80	197.7	3679	208.8	3739	219.9	3797	231.5	3854
No ice, no wind	100	202.0	3605	213.2	3665	224.6	3725	236.3	3781
Heavy-Final									
1/2" ice, no wind	32	277.0	—	291.6	—				
No ice, no wind	60	210.4	3483	223.2	3523				
No ice, no wind	100	219.6	3343	232.6	3387				
Medium-Final									
1/4" ice, no wind	32	233.0	—	245.8	—	258.9	—	272.5	—
No ice, no wind	60	200.9	3642	211.8	3695	223.1	3748	235.5	3800
No ice, no wind	100	209.0	3490	221.1	3548	233.0	3603	245.3	3657
Light-Final									
No ice, no wind	60	197.8	3683	208.4	3739	220.3	3795	232.2	3850
No ice, no wind	100	206.9	3529	218.1	3588	229.9	3646	240.4	3701

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	225.8	4211	237.3	4260	249.0	4313	260.9	4367
No ice, no wind	20	229.9	4133	241.8	4186	253.7	4241	265.7	4297
No ice, no wind	40	234.4	4057	246.2	4111	258.3	4167	270.3	4221
No ice, no wind	60	238.7	3983	250.8	4040	262.9	4094	275.2	4151
No ice, no wind	80	243.2	3912	255.4	3964	267.5	4024	279.8	4081
No ice, no wind	100	248.3	3839	260.4	3897	272.7	3952	285.0	4009
Medium-Final									
1/4" ice, no wind	32	286.2	—	300.2	—	314.3	—	328.5	—
No ice, no wind	60	247.8	3857	260.5	3900	273.4	3949	286.2	3997
No ice, no wind	100	257.4	3711	270.3	3761	283.2	3809	296.4	3858
Light-Final									
No ice, no wind	60	24.33	3903	256.5	3956	268.9	4009	281.1	4064
No ice, no wind	100	254.0	3757	266.7	3811	279.7	3866	291.9	3919

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	272.8	4421
No ice, no wind	20	277.8	4350
No ice, no wind	40	282.4	4298
No ice, no wind	60	287.4	4207
No ice, no wind	80	292.2	4137
No ice, no wind	100	297.4	4067
Medium-Final			
1/4" ice, no wind	32	342.8	--
No ice, no wind	60	299.0	3998
No ice, no wind	100	309.4	3864
Light-Final			
No ice, no wind	60	293.6	4101
No ice, no wind	100	304.8	3960

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	6.8	2593	10.1	2664	14.3	2736	19.1	2809
No ice, no wind	20	7.2	2459	10.7	2537	15.2	2615	20.3	2694
No ice, no wind	40	7.7	2319	11.5	2404	16.3	2488	21.5	2572
No ice, no wind	60	8.2	2176	12.4	2268	17.4	2360	22.9	2449
No ice, no wind	80	8.9	2040	13.4	2138	18.6	2236	24.2	2331
No ice, no wind	100	9.6	1903	14.3	2008	19.7	2111	25.5	2213
Heavy-Final									
1/2" ice, no wind	32	13.8	--	20.2	--	27.5	--	35.4	--
No ice, no wind	60	8.6	2096	13.4	2180	18.6	2264	24.3	2349
No ice, no wind	100	10.2	1808	15.2	1906	20.9	2005	27.0	2104
Medium-Final									
1/4" ice, no wind	32	10.7	--	16.1	--	22.0	--	28.7	--
No ice, no wind	60	8.4	2123	12.9	2211	18.1	2299	23.7	2386
No ice, no wind	100	10.0	1834	14.9	1938	20.3	2040	26.3	2141
Light-Final									
No ice, no wind	60	8.3	2141	12.7	2229	17.8	2318	23.4	2404
No ice, no wind	100	9.8	1849	14.5	1954	20.0	2057	26.0	2160

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	24.5	2882	30.5	2957	37.0	3031	43.7	3107
No ice, no wind	20	25.9	2772	31.9	2850	38.6	2928	45.5	3007
No ice, no wind	40	27.3	2655	33.5	2739	40.3	2822	47.3	2904
No ice, no wind	60	28.9	2538	35.4	2627	42.2	2714	49.3	2801
No ice, no wind	80	30.4	2425	37.1	2518	44.0	2609	51.2	2699
No ice, no wind	100	31.8	2313	38.6	2412	45.7	2509	53.0	2602
Heavy-Final									
1/2" ice, no wind	32	43.8	--	52.8	--	62.2	--	72.0	--
No ice, no wind	60	30.6	2432	37.4	2515	44.4	2597	51.7	2680
No ice, no wind	100	33.7	2201	40.7	2296	48.1	2390	55.8	2483
Medium-Final									
1/4" ice, no wind	32	35.7	--	43.3	--	51.3	--	59.6	--
ice, no wind	60	29.9	2472	36.5	2560	43.4	2646	50.6	2732
ice, no wind	100	32.9	2240	39.9	2337	47.1	2432	54.6	2526
wind	60	29.5	2492	36.1	2579	42.9	2666	50.1	2753
wind	100	32.5	2259	39.4	2358	46.6	2455	454.1	2551

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	50.9	3183	58.5	3261	66.4	3340	74.4	3419
No ice, no wind	20	52.7	3086	60.4	3166	68.4	3246	76.6	3326
No ice, no wind	40	54.6	2987	62.4	3069	70.4	3151	78.8	3232
No ice, no wind	60	56.6	2887	64.5	2971	72.7	3056	81.1	3141
No ice, no wind	80	58.7	2789	66.6	2877	75.0	2965	83.5	3052
No ice, no wind	100	60.7	2698	68.6	2789	77.1	2878	85.7	2967
Heavy-Final									
1/2" ice, no wind	32	82.1	--	92.6	--	103.5	--	114.9	--
No ice, no wind	60	59.3	2762	67.5	2842	75.9	2922	84.7	3001
No ice, no wind	100	63.7	2575	72.2	2661	80.9	2747	90.0	2832
Medium-Final									
1/4" ice, no wind	32	68.3	--	77.2	--	86.9	--	96.8	--
No ice, no wind	60	58.1	2817	66.2	2900	74.7	2983	83.2	3066
No ice, no wind	100	62.5	2619	70.9	2708	79.6	2796	88.4	2883
Light-Final									
No ice, no wind	60	57.6	2839	65.5	2923	73.9	3007	82.4	3090
No ice, no wind	100	61.9	2645	70.2	2733	78.8	2821	87.5	2908
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	82.7	3497	91.2	3575	100.2	3652	109.4	3729
No ice, no wind	20	84.9	3405	93.6	3484	102.7	3563	112.0	3641
No ice, no wind	40	87.2	3313	96.0	3394	105.2	3475	114.6	3556
No ice, no wind	60	89.7	3225	98.6	3308	107.9	3390	117.4	3471
No ice, no wind	80	92.2	3138	101.2	3223	110.6	3307	120.3	3388
No ice, no wind	100	94.6	3053	103.7	3139	113.3	3224	123.1	3306
Heavy-Final									
1/2" ice, no wind	32	126.7	--	138.9	--	151.5	--	164.5	--
No ice, no wind	60	93.8	3079	103.2	3156	113.2	3232	123.3	3307
No ice, no wind	100	99.4	2917	109.1	2995	119.1	3073	129.5	3147
Medium-Final									
1/4" ice, no wind	32	106.8	--	117.3	--	128.1	--	139.2	--
No ice, no wind	60	92.1	3147	101.3	3227	110.8	3307	120.5	3386
No ice, no wind	100	97.5	2969	107.0	3054	116.8	3137	126.9	3219
Light-Final									
No ice, no wind	60	91.1	3173	100.2	3256	109.6	3334	119.2	3414
No ice, no wind	100	96.6	2995	106.0	3080	115.8	3164	125.8	3246

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	118.9	3807	128.9	3883	139.0	3960	149.4	4035
No ice, no wind	20	121.6	3720	131.7	3799	141.9	3877	152.5	3953
No ice, no wind	40	124.4	3636	134.6	3716	144.9	3795	155.6	3873
No ice, no wind	60	127.3	3553	137.6	3634	148.1	3715	158.8	3794
No ice, no wind	80	130.3	3471	140.6	3554	151.3	3636	162.1	3717
No ice, no wind	100	133.3	3391	143.7	3475	154.5	3558	165.5	3640
Heavy-Final									
1/2" ice, no wind	32	178.1	--	191.8	--	205.8	--	220.0	--
No ice, no wind	60	133.9	3382	144.7	3451	156.1	3519	167.8	3584
No ice, no wind	100	140.6	3222	151.5	3292	163.0	3362	174.9	3429
Medium-Final									
1/4" ice, no wind	32	150.7	--	162.7	--	174.8	--	187.1	--
No ice, no wind	60	130.8	3464	141.3	3542	152.2	3619	163.1	3696
No ice, no wind	100	137.3	3300	148.1	3381	159.2	3462	170.3	3541
Light-Final									
No ice, no wind	60	129.4	3494	139.8	3573	150.5	3651	161.4	3729
No ice, no wind	100	136.2	3329	146.7	3411	157.7	3493	168.7	3573

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	159.8	4108	170.4	4180	181.3	4252	192.4	4319
No ice, no wind	20	163.0	4029	173.9	4101	184.9	4174	196.0	4243
No ice, no wind	40	166.2	3949	177.3	4024	188.4	4099	199.5	4168
No ice, no wind	60	169.7	3872	180.7	3948	192.0	4024	203.1	4094
No ice, no wind	80	173.1	3795	184.2	3873	195.6	3950	206.9	4021
No ice, no wind	100	176.5	3720	187.8	3799	199.4	3876	210.9	3949
Heavy-Final									
1/2" ice, no wind	32	234.6	--	249.6	--	265.0	--		
No ice, no wind	60	179.9	3647	192.3	3708	205.3	3766		
No ice, no wind	100	187.3	3495	200.0	3560	213.2	3624		
Medium-Final									
1/4" ice, no wind	32	199.7	--	212.4	--	225.5	--	238.7	--
No ice, no wind	60	174.3	3771	185.7	3844	197.5	3917	208.4	3981
No ice, no wind	100	181.9	3618	193.5	3694	205.2	3767	217.5	3835
Light-Final									
No ice, no wind	60	172.5	3805	183.7	3880	195.5	3954	207.0	4023
No ice, no wind	100	180.0	3651	191.4	3728	203.0	3804	214.7	3875

TABLE II

Initial Sags and Tensions with Cable in Place, and Final Sags for Ground Clearance Determination of 5/16" (7-wire) Extra High Strength Galvanized Steel Messenger Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable 1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	203.4	4387	214.8	4453	226.5	4518	238.5	4581
No ice, no wind	20	207.2	4312	218.8	4379	230.5	4445	242.6	4509
No ice, no wind	40	210.9	4237	222.6	4305	234.5	4372	246.7	4437
No ice, no wind	60	214.7	4164	226.5	4233	238.4	4301	250.8	4367
No ice, no wind	80	218.5	4093	230.5	4163	242.5	4231	254.9	4299
No ice, no wind	100	222.6	4022	234.7	4093	247.1	4163	259.5	4230
Medium-Final									
1/4" ice, no wind	32	252.3	--	266.1	--	280.2	--	294.7	--
No ice, no wind	60	221.5	4046	234.0	4109	246.6	4171	259.7	4232
No ice, no wind	100	229.9	3903	242.5	3970	255.5	4034	268.7	4097
Light-Final									
No ice, no wind	60	218.7	4091	230.9	4158	243.1	4223	255.8	4287
No ice, no wind	100	226.8	3946	239.1	4014	251.7	4081	262.5	4147
Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	250.8	4644	263.5	4708	276.2	4772	288.9	4836
No ice, no wind	20	255.0	4573	267.9	4638	280.8	4703	293.7	4769
No ice, no wind	40	259.2	4502	272.1	4567	285.0	4632	297.9	4698
No ice, no wind	60	263.4	4433	276.4	4499	289.4	4565	302.5	4631
No ice, no wind	80	267.6	4365	280.6	4431	293.6	4498	306.7	4565
No ice, no wind	100	272.4	4298	285.4	4364	198.4	4430	311.5	4497
Medium-Final									
1/4" ice, no wind	32	309.6	--	324.7	--	339.8	--	355.0	--
No ice, no wind	60	273.0	4292	286.8	4348	300.6	4404	314.4	4460
No ice, no wind	100	281.4	4160	295.5	4216	309.6	4272	323.7	4328
Light-Final									
No ice, no wind	60	268.8	4350	282.0	4412	295.2	4475	308.4	4538
No ice, no wind	100	277.8	4212	291.4	4274	305.0	4337	318.7	4400

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F.

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	301.8	4900
No ice, no wind	20	306.6	4835
No ice, no wind	40	310.8	4765
No ice, no wind	60	315.6	4698
No ice, no wind	80	319.8	4632
No ice, no wind	100	324.6	4564
Medium-Final			
1/4" ice, no wind	32	370.2	--
No ice, no wind	60	328.2	4516
No ice, no wind	100	337.8	4383
Light-Final			
No ice, no wind	60	321.6	4601
No ice, no wind	100	332.4	4463

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	7.7	2639	11.4	2727	16.0	2816	21.2	2905
No ice, no wind	20	8.2	2508	12.0	2603	16.9	2698	22.4	2793
No ice, no wind	40	8.7	2372	12.8	2474	17.9	2576	23.5	2675
No ice, no wind	60	9.2	2234	13.7	2343	19.0	2452	24.9	2555
No ice, no wind	80	9.9	2102	14.7	2217	20.2	2332	26.2	2442
No ice, no wind	100	10.6	1970	15.6	2093	21.3	2212	27.5	2328
Heavy-Final									
1/2" ice, no wind	32	14.7	--	21.3	--	28.9	--	37.1	--
No ice, no wind	60	9.6	2157	14.7	2257	20.2	2358	26.4	2458
No ice, no wind	100	11.2	1879	16.5	1993	22.5	2108	29.0	2221
Medium-Final									
1/4" ice, no wind	32	11.7	--	17.3	--	23.5	--	30.6	--
No ice, no wind	60	9.4	2183	14.2	2287	19.7	2391	25.7	2494
No ice, no wind	100	11.0	1905	16.2	2026	21.9	2144	28.3	2260
Light-Final									
No ice, no wind	60	9.3	2200	14.0	2305	19.4	2409	25.4	2512
No ice, no wind	100	10.8	1919	15.8	2041	21.6	2160	28.0	2278

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	27.1	2993	33.6	3082	40.7	3170	47.9	3259
No ice, no wind	20	28.5	2886	35.0	2978	42.2	3070	49.7	3163
No ice, no wind	40	29.8	2773	36.5	2872	43.9	2968	51.4	3064
No ice, no wind	60	31.4	2661	38.3	2764	45.7	2865	53.3	2965
No ice, no wind	80	32.8	2551	40.0	2659	47.4	2764	55.2	2867
No ice, no wind	100	34.2	2443	41.5	2556	49.1	2667	56.9	2773
Heavy-Final									
1/2" ice, no wind	32	45.9	--	55.3	--	65.1	--	75.4	--
No ice, no wind	60	33.1	2555	40.3	2652	47.9	2748	55.7	2843
No ice, no wind	100	36.2	2332	43.6	2441	51.5	2549	59.7	2654
Medium-Final									
1/4" ice, no wind	32	38.0	--	46.0	--	54.5	--	63.3	--
No ice, no wind	60	32.4	2595	39.4	2698	46.9	2798	54.6	2897
No ice, no wind	100	35.3	2373	42.8	2484	50.5	2592	58.5	2698
Light-Final									
No ice, no wind	60	31.9	2615	39.0	2717	46.4	2819	54.0	2918
No ice, no wind	100	34.9	2392	42.3	2504	50.0	2615	58.0	2723

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	55.6	3349	63.7	3440	72.1	3531	80.6	3622
No ice, no wind	20	57.4	3255	65.5	3348	74.0	3440	82.7	3532
No ice, no wind	40	59.2	2160	67.5	3254	76.0	3349	84.9	3442
No ice, no wind	60	61.2	3064	69.5	3160	78.2	3257	87.1	3354
No ice, no wind	80	63.2	2969	71.6	3069	80.5	3169	89.5	3267
No ice, no wind	100	65.1	2880	73.5	2983	82.5	3084	91.6	3184
Heavy-Final									
1/2" ice, no wind	32	85.9	--	97.0	--	108.4	--	120.2	--
No ice, no wind	60	63.9	2938	72.6	3029	81.6	3120	90.9	3209
No ice, no wind	100	68.1	2758	77.2	2856	86.4	2952	96.0	3047
Medium-Final									
1/4" ice, no wind	32	72.4	--	81.8	--	91.9	--	102.3	--
No ice, no wind	60	62.6	2995	71.1	3090	80.1	3185	89.1	3279
No ice, no wind	100	66.9	2802	75.7	2903	84.9	3003	94.2	3101
Light-Final									
No ice, no wind	60	62.0	3018	70.4	3114	79.3	3211	88.3	3305
No ice, no wind	100	66.2	2829	75.0	2930	84.0	3030	93.3	3128

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	89.5	3712	98.5	3801	108.1	3889	117.8	3977
No ice, no wind	20	91.6	3623	100.9	3714	110.5	3803	120.3	3892
No ice, no wind	40	93.9	3534	103.2	3627	112.9	3719	122.8	3809
No ice, no wind	60	96.3	3449	105.7	3542	115.5	3636	125.5	3727
No ice, no wind	80	98.7	3364	108.3	3460	118.2	3555	128.3	3646
No ice, no wind	100	101.0	3282	110.7	3379	120.8	3475	131.0	3567
Heavy-Final									
1/2" ice, no wind	32	132.5	--	145.3	--	158.4	--	172.1	--
No ice, no wind	60	100.7	3296	110.6	3381	121.3	3464	132.3	3543
No ice, no wind	100	106.0	3139	116.3	3225	127.0	3309	138.3	3388
`inal									
, no wind	32	112.8	--	123.8	--	135.2	--	146.8	--
no wind	60	98.6	3371	108.4	3461	118.5	3550	128.8	3638
no wind	100	103.9	3198	113.9	3313	124.3	3385	134.9	3476
	60	97.6	3399	107.2	3492	117.2	3581	127.4	3670
	'00	102.9	3225	112.9	3321	123.2	3415	133.7	3506

TABLE II

Initial Sags and Tensions with Cable in Place, and Final Sags for Ground Clearance Determination of 5/16" (7-wire) Extra High Strength Galvanized Steel Messenger Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable 1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	127.8	4064	138.3	4149	149.1	4235	160.2	4318
No ice, no wind	20	130.4	3980	141.0	4069	151.9	4155	163.1	4239
No ice, no wind	40	133.1	3899	143.8	3988	154.8	4076	166.1	4161
No ice, no wind	60	135.9	3818	146.7	3908	157.8	3998	169.2	4085
No ice, no wind	80	138.8	3739	149.6	3831	160.9	3921	172.3	4009
No ice, no wind	100	141.6	3661	152.6	3753	164.0	3845	175.6	3934
Heavy-Final									
1/2" ice, no wind	32	186.4	--	200.7	--	215.2	--	230.0	--
No ice, no wind	60	143.6	3621	155.2	3695	167.2	3768	179.5	3839
No ice, no wind	100	150.1	3467	161.8	3542	173.9	3618	186.4	3691
Medium-Final									
1/4" ice, no wind	32	158.9	--	171.4	--	184.1	--	197.2	--
No ice, no wind	60	139.7	3719	150.5	3807	162.3	3893	174.1	3974
No ice, no wind	100	145.9	3565	157.3	3653	169.0	3740	181.0	3823
Light-Final									
No ice, no wind	60	138.1	3759	149.0	3847	160.2	3933	171.9	4017
No ice, no wind	100	144.6	3598	155.7	3688	167.3	3779	179.0	3865

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	171.2	4399	182.5	4479	194.0	4560	205.6	4637
No ice, no wind	20	174.3	4322	185.8	4403	197.4	4484	209.1	4563
No ice, no wind	40	177.4	4245	189.1	4328	200.8	4412	212.4	4490
No ice, no wind	60	180.7	4170	192.3	4255	204.2	4339	215.9	4418
No ice, no wind	80	183.9	4095	195.7	4181	207.6	4267	219.5	4347
No ice, no wind	100	187.3	4022	199.2	4109	211.3	4195	223.3	4277
Heavy-Final									
1/2" ice, no wind	32	245.0	--						
No ice, no wind	60	192.0	3908						
No ice, no wind	100	199.2	3764						
Medium-Final									
1/4" ice, no wind	32	210.6	--	224.1	--	237.8	--	251.7	--
No ice, no wind	60	186.1	4054	198.3	4131	210.8	4209	222.6	4280
No ice, no wind	100	193.4	3904	205.8	3985	218.2	4063	231.2	4138
Light-Final									
No ice, no wind	60	183.7	4099	195.6	4181	208.0	4261	220.2	4338
No ice, no wind	100	191.0	3949	203.1	4032	215.3	4115	227.7	4194

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
qo ice, no wind	0	217.2	4714	229.3	4787	241.7	4859	254.3	4930
No ice, no wind	20	220.8	4641	233.1	4715	245.5	4789	258.3	4861
No ice, no wind	40	224.4	4569	236.8	4644	249.4	4719	262.2	4792
No ice, no wind	60	228.0	4498	240.5	4574	253.1	4650	266.1	4724
No ice, no wind	80	231.6	4428	244.3	4506	257.0	4581	270.0	4657
No ice, no wind	100	235.5	4359	248.3	4438	261.3	4515	274.4	4590
Medium-Final									
1/4" ice, no wind	32	265.9	—	280.7	—	295.7	—	311.0	—
No ice, no wind	60	236.1	4351	249.7	4417	263.3	4482	277.4	4547
No ice, no wind	100	244.2	4212	257.9	4282	271.9	4349	286.0	4415
Light-Final									
No ice, no wind	60	232.5	4414	245.5	4486	258.6	4557	272.0	4627
No ice, no wind	100	240.3	4272	253.5	4345	266.9	4418	278.9	4490

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	267.2	5001	281.0	5079	294.9	5158	308.8	5237
No ice, no wind	20	271.2	4933	285.2	5013	299.2	5093	313.2	5173
No ice, no wind	40	275.2	4865	289.3	4945	303.2	5025	317.4	5106
No ice, no wind	60	279.3	4798	293.4	4879	307.6	4960	321.8	5041
No ice, no wind	80	283.3	4732	297.5	4813	311.7	4894	325.9	4976
No ice, no wind	100	287.8	4667	301.9	4748	316.0	4829	330.2	4911
Medium-Final									
1/4" ice, no wind	32	326.7	—	347.9	—	359.2	—	375.5	—
No ice, no wind	60	291.6	4610	310.4	4681	324.2	4751	338.0	4822
No ice, no wind	100	299.8	4481	319.2	4552	333.1	4624	347.2	4695
Light-Final									
No ice, no wind	60	285.7	4696	300.1	4773	314.6	4851	329.0	4928
No ice, no wind	100	294.4	4561	309.1	4638	323.8	4716	338.6	4794

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.20 Pounds per foot with Diameter 1.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	322.8	5316
No ice, no wind	20	327.3	5254
No ice, no wind	40	331.5	5188
No ice, no wind	60	336.0	5123
No ice, no wind	80	340.2	5057
No ice, no wind	100	344.4	4993
Medium-Final			
1/4" ice, no wind	32	391.8	—
No ice, no wind	60	351.9	4892
No ice, no wind	100	361.2	4766
Light-Final			
No ice, no wind	60	343.5	5005
No ice, no wind	100	353.4	4873

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	8.6	2685	12.7	2791	17.7	2896	23.3	3001
No ice, no wind	20	9.2	2557	13.3	2670	18.6	2782	24.5	2892
No ice, no wind	40	9.7	2425	14.1	2545	19.5	2664	25.5	2779
No ice, no wind	60	10.2	2292	15.0	2418	20.6	2544	26.9	2661
No ice, no wind	80	10.9	2164	16.0	2296	21.8	2428	28.2	2553
No ice, no wind	100	11.6	2038	16.9	2178	22.9	2313	29.5	2444
Heavy-Final									
1/2" ice, no wind	32	15.6	--	22.4	--	30.3	--	38.8	--
No ice, no wind	60	10.6	2218	16.0	2335	21.8	2452	28.5	2567
No ice, no wind	100	12.2	1950	17.8	2081	24.1	2211	31.0	2338
Medium-Final									
1/4" ice, no wind	32	12.7	--	18.5	--	25.0	--	32.5	--
No ice, no wind	60	10.4	2243	15.5	2364	21.3	2483	27.7	2602
No ice, no wind	100	12.0	1976	17.5	2114	23.5	2248	30.3	2379
Light-Final									
No ice, no wind	60	10.3	2260	15.3	2381	21.0	2501	27.4	2620
No ice, no wind	100	11.8	1989	17.1	2129	23.2	2264	30.0	2397
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	29.7	3104	36.7	3207	44.4	3309	52.1	3412
No ice, no wind	20	31.1	3000	38.1	3107	45.8	3213	53.9	3319
No ice, no wind	40	32.3	2892	39.5	3005	47.5	3115	55.5	3224
No ice, no wind	60	33.9	2784	41.2	2901	49.2	3016	57.3	3129
No ice, no wind	80	35.2	2677	42.9	2800	50.8	2919	59.2	3035
No ice, no wind	100	36.6	2573	44.4	2700	52.5	2825	60.8	2944
Heavy-Final									
1/2" ice, no wind	32	48.0	--	57.8	--	68.0	--	78.8	--
No ice, no wind	60	35.6	2678	43.2	2789	51.4	2899	59.7	3007
No ice, no wind	100	38.7	2464	46.5	2587	54.9	2708	63.6	2825
Medium-Final									
ice, no wind	32	40.3	--	48.7	--	57.7	--	67.0	--
, no wind	60	34.9	2718	42.3	2836	50.4	2950	58.6	3062
, no wind	100	37.7	2506	45.7	2631	53.9	2752	62.4	2870
1									
wind	60	34.3	2738	41.9	2855	49.9	2972	57.9	3083
wind	100	37.3	2525	45.2	2651	53.4	2775	61.9	2895

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	60.4	3515	68.9	3619	77.8	3722	86.8	3825
No ice, no wind	20	62.1	3424	70.7	3530	79.6	3634	88.9	3739
No ice, no wind	40	63.8	3333	72.6	3439	81.6	3547	91.0	3652
No ice, no wind	60	65.8	3241	74.6	3349	83.7	3458	93.2	3567
No ice, no wind	80	67.7	3149	76.6	3261	86.0	3373	95.5	3482
No ice, no wind	100	69.5	3062	78.4	3178	87.9	3290	97.5	3401
Heavy-Final									
1/2" ice, no wind	32	89.8	—	101.4	—	113.3	—	125.5	—
No ice, no wind	60	68.5	3114	77.7	3216	87.3	3319	97.2	3417
No ice, no wind	100	72.6	2941	82.2	3051	91.9	3158	102.0	3262
Medium-Final									
1/4" ice, no wind	32	76.5	—	86.4	—	96.9	—	107.8	—
No ice, no wind	60	67.1	3173	76.0	3280	85.5	3387	95.1	3492
No ice, no wind	100	71.3	2985	80.5	3098	90.2	3210	100.0	3319
Light-Final									
No ice, no wind	60	66.5	3197	75.3	3306	84.7	3415	94.2	3520
No ice, no wind	100	70.5	3013	79.8	3127	89.3	3239	99.1	3348
Span Length Initial		400-ft.		425-ft.		450-ft.		475-ft.	
No ice, no wind	0	96.3	3927	105.9	4027	116.0	4126	126.2	4225
No ice, no wind	20	98.3	3841	108.2	3944	118.3	4043	128.6	4143
No ice, no wind	40	100.6	3755	110.4	3861	120.6	3963	131.0	4062
No ice, no wind	60	102.9	3673	112.9	3777	123.2	3882	133.6	3983
No ice, no wind	80	105.2	3590	115.4	3697	125.8	3803	136.3	3905
No ice, no wind	100	107.5	3511	117.7	3619	128.3	3725	138.9	3828
Heavy-Final									
1/2" ice, no wind	32	138.3	—	151.7	—	165.3	—	179.8	—
No ice, no wind	60	107.6	3513	118.1	3606	129.4	3696	141.3	3779
No ice, no wind	100	112.7	3362	123.6	3455	135.0	3545	147.1	3629
Medium-Final									
1/4" ice, no wind	32	118.9	—	130.4	—	142.3	—	154.4	—
No ice, no wind	60	105.1	3595	115.5	3695	126.2	3793	137.1	3890
No ice, no wind	100	110.3	3427	120.8	3572	131.8	3633	143.0	3733
Light-Final									
No ice, no wind	60	104.1	3625	114.2	3728	124.9	3828	135.6	3926
No ice, no wind	100	109.2	3456	119.8	3562	130.6	3666	141.6	3766

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	136.7	4321	147.7	4416	159.2	4510	171.0	4601
No ice, no wind	20	139.2	4211	150.3	4339	161.9	4433	173.8	4525
No ice, no wind	40	141.8	4162	153.0	4260	164.7	4357	176.6	4449
No ice, no wind	60	144.5	4084	155.8	4183	167.5	4281	179.6	4376
No ice, no wind	80	147.3	4007	158.6	4108	170.5	4206	182.5	4302
No ice, no wind	100	149.9	3931	161.5	4032	173.5	4132	185.8	4229
Heavy-Final									
1/2" ice, no wind	32	194.7	--	209.6	--	224.7	--		
No ice, no wind	60	153.4	3860	165.7	3939	178.3	4018		
No ice, no wind	100	159.6	3712	172.1	3793	184.8	3874		
Medium-Final									
1/4" ice, no wind	32	167.1	--	180.1	--	193.4	--	207.3	--
No ice, no wind	60	148.6	3975	160.3	4072	172.4	4167	185.1	4252
No ice, no wind	100	154.6	3830	166.6	3925	178.8	4018	191.7	4105
Light-Final									
No ice, no wind	60	146.8	4024	158.3	4121	170.0	4215	182.4	4305
No ice, no wind	100	153.0	3867	164.7	3966	176.9	4065	189.3	4157
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	182.7	4690	194.6	4779	206.7	4868	218.8	4955
No ice, no wind	20	185.6	4616	197.7	4705	209.9	4795	222.2	4883
No ice, no wind	40	188.6	4541	200.9	4633	213.2	4725	225.4	4812
No ice, no wind	60	191.7	4469	204.0	4562	216.4	4654	228.7	4742
No ice, no wind	80	194.8	4396	207.2	4490	219.6	4584	232.1	4673
No ice, no wind	100	198.1	4324	210.6	4419	223.2	4514	235.7	4605
Medium-Final									
1/4" ice, no wind	32	221.5	--	235.8	--	250.2	--	264.7	--
No ice, no wind	60	197.9	4337	210.9	4419	224.1	4501	236.8	4579
No ice, no wind	100	204.9	4191	218.1	4276	231.3	4360	244.9	4441
Light-Final									
No ice, no wind	60	194.9	4393	207.6	4482	220.6	4569	233.4	4653
No ice, no wind	100	202.0	4247	214.8	4336	227.7	4426	240.7	4513

TABLE II

Initial Sags and Tensions with Cable in Place, and Final Sags for Ground Clearance Determination of 5/16" (7-wire) Extra High Strength Galvanized Steel Messenger Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable 1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	231.0	5041	243.8	5121	256.9	5201	270.1	5279
No ice, no wind	20	234.4	4970	247.4	5051	260.5	5133	274.0	5213
No ice, no wind	40	237.9	4901	251.0	4983	264.3	5066	277.7	5147
No ice, no wind	60	241.3	4832	254.5	4915	267.8	4999	281.4	5081
No ice, no wind	80	244.8	4763	258.1	4849	271.5	4932	285.1	5016
No ice, no wind	100	248.4	4696	261.9	4783	275.5	4867	289.3	4951
Medium-Final									
1/4" ice, no wind	32	279.5	--	295.3	--	211.2	--	327.4	--
No ice, no wind	60	250.7	4657	265.4	4725	280.0	4794	295.1	4862
No ice, no wind	100	258.6	4521	273.3	4594	288.3	4664	303.3	4733
Light-Final									
No ice, no wind	60	246.3	4737	260.2	4815	274.1	4891	288.2	4967
No ice, no wind	100	253.8	4598	267.9	4677	282.1	4755	295.3	4833
Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
Initial									
No ice, no wind	0	283.6	5358	298.6	5451	313.6	5544	328.7	5638
No ice, no wind	20	287.5	5293	302.6	5388	317.7	5483	332.8	5578
No ice, no wind	40	291.3	5228	306.5	5323	321.7	5419	336.9	5515
No ice, no wind	60	295.2	5163	310.5	5259	325.8	5355	341.1	5451
No ice, no wind	80	299.0	5099	314.4	5195	329.8	5291	345.2	5387
No ice, no wind	100	303.2	5036	318.4	5132	333.6	5228	348.9	5325
Light-Final									
No ice, no wind	60	302.6	5042	318.3	5134	334.0	5226	349.7	5318
No ice, no wind	100	311.1	4910	326.9	5003	342.7	5096	358.5	5189

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.40 Pounds per foot with Diameter 1.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		900-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	343.8	5732
No ice, no wind	20	348.0	5673
No ice, no wind	40	352.2	5611
No ice, no wind	60	356.4	5548
No ice, no wind	80	360.6	5483
No ice, no wind	100	364.2	5422
Light-Final			
No ice, no wind	60	365.4	5410
No ice, no wind	100	374.4	5283

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.60 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	9.5	2731	14.0	2855	19.4	2976	25.5	3097
No ice, no wind	20	10.2	2606	14.6	2737	20.3	2866	26.6	2991
No ice, no wind	40	10.7	2479	15.4	2616	21.1	2752	27.5	2883
No ice, no wind	60	11.2	2350	16.3	2493	22.2	2636	28.9	2768
No ice, no wind	80	11.9	2227	17.3	2375	23.4	2524	30.2	2664
No ice, no wind	100	12.6	2106	18.2	2263	24.5	2414	31.5	2560
Heavy-Final									
1/2" ice, no wind	32	16.5	--	23.5	--	31.7	--	40.5	--
No ice, no wind	60	11.6	2279	17.3	2413	23.4	2546	30.6	2676
No ice, no wind	100	13.2	2021	19.1	2169	25.7	2314	33.0	2455
Medium-Final									
1/4" ice, no wind	32	13.7	--	19.7	--	26.5	--	34.4	--
No ice, no wind	60	11.4	2304	16.8	2441	22.9	2576	29.7	2710
No ice, no wind	100	13.0	2047	18.8	2203	25.1	2353	32.3	2498
Light-Final									
No ice, no wind	60	11.3	2320	16.6	2457	22.6	2593	29.4	2728
No ice, no wind	100	12.8	2060	18.4	2217	24.8	2368	32.0	2516
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	32.3	3215	39.9	3332	48.1	3448	56.4	3565
No ice, no wind	20	33.7	3114	41.2	3236	49.4	3356	58.1	3475
No ice, no wind	40	34.8	3011	42.5	3138	51.1	3262	59.6	3384
No ice, no wind	60	36.4	2907	44.1	3038	52.7	3167	61.3	3293
No ice, no wind	80	37.7	2803	45.8	2941	54.2	3074	63.2	3203
No ice, no wind	100	39.0	2703	47.3	2844	55.9	2983	64.7	3115
Heavy-Final									
1/2" ice, no wind	32	50.1	--	60.3	--	71.0	--	82.2	--
No ice, no wind	60	38.1	2802	46.2	2926	54.9	3050	63.7	3171
No ice, no wind	100	41.2	2596	49.4	2733	58.3	2867	67.5	2997
Medium-Final									
1/4" ice, no wind	32	42.6	--	51.5	--	60.9	--	70.7	--
No ice, no wind	60	37.4	2842	45.2	2974	53.9	3103	62.6	3228
No ice, no wind	100	40.1	2639	48.6	2778	57.3	2912	66.3	3042
Light-Final									
No ice, no wind	60	36.7	2861	44.9	2993	53.4	3125	61.9	3249
No ice, no wind	100	39.7	2658	48.1	2798	56.8	2935	65.8	3067

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.60 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	65.2	3681	74.2	3798	83.5	3914	93.1	4028
No ice, no wind	20	66.8	3594	75.9	3712	85.3	3828	95.1	3946
No ice, no wind	40	68.5	3506	77.7	3625	87.2	3745	97.1	3862
No ice, no wind	60	70.4	3418	79.7	3538	89.3	3659	99.3	3780
No ice, no wind	80	72.2	3330	81.6	3454	91.5	3577	101.5	3697
No ice, no wind	100	73.9	3245	83.4	3373	93.3	3496	103.5	3619
Heavy-Final									
1/2" ice, no wind	32	93.7	--	105.8	--	118.2	--	130.8	--
No ice, no wind	60	73.1	3290	82.9	3404	93.0	3518	103.5	3625
No ice, no wind	100	77.1	3124	87.2	3246	97.5	3364	108.0	3477
Medium-Final									
1/4" ice, no wind	32	80.7	--	91.0	--	102.0	--	113.3	--
No ice, no wind	60	71.6	3351	81.0	3471	91.0	3590	101.1	3706
No ice, no wind	100	75.7	3169	85.4	3294	95.5	3417	105.8	3538
Light-Final									
No ice, no wind	60	71.0	3376	80.2	3498	90.1	3619	100.1	3736
No ice, no wind	100	74.9	3198	84.6	3324	94.6	3448	104.9	3568

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	103.1	4142	113.3	4253	123.9	4364	134.6	4473
No ice, no wind	20	105.1	4059	115.5	4174	126.1	4284	136.9	4394
No ice, no wind	40	107.3	3976	117.7	4095	128.4	4207	139.2	4315
No ice, no wind	60	109.5	3897	120.1	4012	130.9	4128	141.7	4239
No ice, no wind	80	111.8	3817	122.5	3935	133.4	4051	144.3	4164
No ice, no wind	100	114.0	3740	124.7	3859	135.8	3977	146.8	4090
Heavy-Final									
1/2" ice, no wind	32	144.2	--	158.1	--	172.2	--	187.5	--
No ice, no wind	60	114.5	3731	125.6	3831	137.5	3928	150.3	4015
No ice, no wind	100	119.4	3585	130.9	3685	143.0	3781	155.9	3870
Medium-Final									
1/4" ice, no wind	32	125.0	--	137.0	--	149.5	--	162.1	--
No ice, no wind	60	111.6	3819	122.6	3929	133.9	4037	145.4	4142
No ice, no wind	100	116.7	3656	127.7	3769	139.3	3882	151.1	3990
	60	110.6	3851	121.3	3964	132.6	4075	143.8	4182
	100	115.5	3687	126.7	3803	138.0	3917	149.5	4027

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.60 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	145.6	4579	157.1	4683	169.3	4785	181.8	4884
No ice, no wind	20	148.0	4502	159.6	4609	171.9	4711	184.5	4811
No ice, no wind	40	150.5	4425	162.2	4533	174.6	4638	187.2	4738
No ice, no wind	60	153.2	4350	164.9	4458	177.2	4565	190.0	4667
No ice, no wind	80	155.8	4275	167.6	4385	180.1	4491	192.8	4595
No ice, no wind	100	158.3	4201	170.4	4311	183.0	4419	196.0	4524
Heavy-Final									
1/2" ice, no wind	32	203.0	--						
No ice, no wind	60	163.2	4100						
No ice, no wind	100	169.2	3957						
Medium-Final									
1/4" ice, no wind	32	175.3	--	188.8	--	202.7	--	217.5	--
No ice, no wind	60	157.5	4231	170.9	4337	182.5	4442	196.1	4531
No ice, no wind	100	163.3	4095	175.9	4197	188.6	4296	202.4	4387
Light-Final									
No ice, no wind	60	155.5	4289	167.6	4395	179.8	4497	192.9	4593
No ice, no wind	100	161.4	4136	173.7	4244	186.5	4351	199.7	4449
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	194.2	4981	206.7	5079	219.4	5176	232.0	5273
No ice, no wind	20	197.0	4910	209.7	5007	222.4	5106	235.3	5203
No ice, no wind	40	199.8	4838	212.7	4938	225.6	5038	238.4	5134
No ice, no wind	60	202.8	4768	215.7	4869	228.6	4969	241.5	5067
No ice, no wind	80	205.7	4697	218.7	4799	231.7	4901	244.7	4999
No ice, no wind	100	208.9	4627	222.0	4730	235.1	4833	248.2	4933
Medium-Final									
1/4" ice, no wind	32	232.4	--	247.5	--	262.6	--	277.7	--
No ice, no wind	60	209.7	4620	223.5	4707	237.4	4794	251.0	4878
No ice, no wind	100	216.4	4478	230.5	4567	244.4	4657	258.6	4744
Light-Final									
No ice, no wind	60	206.2	4687	219.6	4783	233.2	4877	246.6	4969
No ice, no wind	100	213.1	4545	226.5	4641	240.1	4737	253.7	4832

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.60 Pounds per foot with Diameter 1.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	244.8	5368	258.3	5455	272.1	5543	286.0	5629
No ice, no wind	20	248.0	5299	261.8	5388	275.6	5477	289.7	5565
No ice, no wind	40	251.4	5233	265.2	5322	279.2	5413	293.2	5502
No ice, no wind	60	254.6	5166	268.6	5257	282.6	5348	296.8	5438
No ice, no wind	80	258.0	5099	272.0	5192	286.0	5283	300.3	5375
No ice, no wind	100	261.4	5034	275.5	5129	289.9	5220	304.2	5312
Medium-Final									
1/4" ice, no wind	32	293.1	--						
No ice, no wind	60	265.4	4963						
No ice, no wind	100	273.0	4831						
Light-Final									
No ice, no wind	60	260.2	5061	274.9	5144	289.6	5225	304.4	5307
No ice, no wind	100	267.3	4925	282.3	5009	297.3	5092	311.7	5176

Span Length		800-ft.		825-ft.	
Initial					
No ice, no wind	0	300.0	5717	316.4	5801
No ice, no wind	20	303.8	5653	320.0	5741
No ice, no wind	40	307.4	5591	323.4	5680
No ice, no wind	60	311.1	5528	327.0	5618
No ice, no wind	80	314.7	5466	330.4	5557
No ice, no wind	100	318.6	5405	334.0	5498
Light-Final					
No ice, no wind	60	319.5	5389	336.4	5471
No ice, no wind	100	327.8	5259	344.5	5342

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	10.4	2778	15.3	2919	21.1	3057	27.7	3193
No ice, no wind	20	11.2	2656	15.9	2804	22.0	2950	28.8	3090
No ice, no wind	40	11.7	2533	16.7	2687	22.7	2840	29.7	2987
No ice, no wind	60	12.2	2409	17.6	2569	23.8	2729	31.0	2875
No ice, no wind	80	12.9	2290	18.6	2454	25.0	2621	32.2	2775
No ice, no wind	100	13.6	2174	19.5	2349	26.1	2515	33.5	2676
Heavy-Final									
1/2" ice, no wind	32	17.5	--	24.7	--	33.1	--	42.3	--
No ice, no wind	60	12.7	2340	18.5	2491	25.0	2640	32.7	2785
No ice, no wind	100	14.3	2093	20.4	2257	27.3	2417	35.1	2573
Medium-Final									
1/4" ice, no wind	32	14.7	--	20.9	--	28.1	--	36.3	--
No ice, no wind	60	12.4	2365	18.1	2518	24.5	2669	31.7	2818
No ice, no wind	100	14.0	2118	20.1	2292	26.7	2458	34.3	2618
Light-Final									
No ice, no wind	60	12.3	2380	17.9	2533	24.2	2685	31.4	2836
No ice, no wind	100	13.9	2131	19.7	2305	26.4	2472	34.0	2635

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	35.0	3326	43.1	3457	51.8	3588	60.7	3718
No ice, no wind	20	36.3	3228	44.4	3365	53.1	3499	62.3	3631
No ice, no wind	40	37.4	3130	45.6	3271	54.7	3409	63.7	3545
No ice, no wind	60	38.9	3030	47.1	3176	56.2	3319	65.4	3458
No ice, no wind	80	40.2	2930	48.7	3082	57.7	3229	67.2	3371
No ice, no wind	100	41.5	2833	50.2	2989	59.4	3141	68.7	3286
Heavy-Final									
1/2" ice, no wind	32	52.2	--	62.8	--	74.0	--	85.6	--
No ice, no wind	60	40.6	2926	49.2	3064	58.4	3202	67.7	3335
No ice, no wind	100	43.7	2728	52.3	2879	61.7	3027	71.4	3169
Medium-Final									
1/4" ice, no wind	32	44.9	--	54.2	--	64.1	--	74.4	--
No ice, no wind	60	39.9	2966	48.1	3112	57.4	3256	66.6	3394
No ice, no wind	100	42.5	2773	51.5	2925	60.7	3072	70.2	3214
Light-Final									
No ice, no wind	60	39.2	2984	47.7	3131	56.9	3278	65.9	3415
No ice, no wind	100	42.1	2792	51.0	2945	60.2	3095	69.7	3240

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	70.0	3848	79.5	3977	89.3	4106	99.4	4232
No ice, no wind	20	71.5	3764	81.1	3894	91.0	4023	101.3	4153
No ice, no wind	40	73.2	3679	82.8	3811	92.8	3943	103.3	4072
No ice, no wind	60	75.0	3595	84.8	3728	94.9	3861	105.4	3993
No ice, no wind	80	76.7	3511	86.6	3647	97.0	3781	107.5	3913
No ice, no wind	100	78.4	3428	88.4	3568	98.8	3703	109.5	3837
Heavy-Final									
1/2" ice, no wind	32	97.6	--	110.2	--	123.1	--	136.2	--
No ice, no wind	60	77.7	3466	88.1	3592	98.8	3717	109.8	3834
No ice, no wind	100	81.6	3308	92.2	3442	103.1	3570	114.1	3692
Medium-Final									
1/4" ice, no wind	32	84.9	--	95.7	--	107.1	--	118.8	--
No ice, no wind	60	76.1	3529	86.0	3662	96.5	3793	107.1	3920
No ice, no wind	100	80.1	3353	90.3	3490	100.8	3625	111.7	3757
Light-Final									
No ice, no wind	60	75.5	3555	85.2	3690	85.5	3823	106.0	3952
No ice, no wind	100	79.3	3383	89.4	3521	99.9	3657	110.7	3789
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	109.9	4357	120.7	4480	131.8	4602	143.0	4721
No ice, no wind	20	111.9	4278	122.8	4404	133.9	4525	145.2	4645
No ice, no wind	40	114.0	4198	125.0	4329	136.2	4451	147.4	4569
No ice, no wind	60	116.2	4121	127.3	4247	138.6	4374	149.9	4495
No ice, no wind	80	118.4	4044	129.6	4173	141.0	4300	152.4	4423
No ice, no wind	100	120.5	3969	131.7	4099	143.3	4229	154.7	4351
Heavy-Final									
1/2" ice, no wind	32	150.1	--	164.5	--	179.1	--	195.2	--
No ice, no wind	60	121.4	3949	133.1	4057	145.6	4161	159.3	4251
No ice, no wind	100	126.1	3808	138.2	3916	151.0	4018	164.8	4111
Medium-Final									
1/4" ice, no wind	32	131.1	--	143.6	--	156.7	--	169.8	--
No ice, no wind	60	118.2	4044	129.7	4164	141.6	4281	153.7	4394
No ice, no wind	100	123.1	3885	134.7	4010	146.8	4131	159.2	4247
Light-Final									
No ice, no wind	60	117.1	4077	128.4	4200	140.3	4322	152.1	4439
No ice, no wind	100	121.9	3918	133.6	4044	145.5	4169	157.4	4288

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	154.5	4837	166.5	4950	179.4	5061	192.6	5167
No ice, no wind	20	156.8	4763	169.0	4879	181.9	4990	195.2	5097
No ice, no wind	40	159.2	4689	171.5	4806	184.5	4919	197.8	5027
No ice, no wind	60	161.7	4616	174.0	4733	187.0	4849	200.4	4958
No ice, no wind	80	164.3	4543	176.6	4662	189.7	4777	213.1	4888
No ice, no wind	100	166.7	4472	179.3	4590	192.6	4707	206.2	4819
Medium-Final									
1/4" ice, no wind	32	183.5	--	197.5	--	212.0	--	227.7	--
No ice, no wind	60	166.4	4487	180.5	4603	192.6	4717	207.1	4810
No ice, no wind	100	172.0	4361	185.2	4470	198.4	4575	213.2	4670
Light-Final									
No ice, no wind	60	164.3	4555	176.9	4669	189.6	4780	203.5	4881
No ice, no wind	100	170.0	4406	182.7	4522	196.1	4637	210.1	4741

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	205.7	5273	218.8	5379	232.1	5485	245.3	5591
No ice, no wind	20	208.4	5204	221.7	5310	235.0	5417	248.4	5523
No ice, no wind	40	211.1	5135	224.6	5243	238.0	5351	251.4	5457
No ice, no wind	60	213.9	5067	227.4	5176	240.9	5284	254.4	5392
No ice, no wind	80	216.6	4998	230.2	5108	243.8	5218	257.4	5326
No ice, no wind	100	219.7	4930	233.4	5041	247.0	5152	260.7	5261
Medium-Final									
1/4" ice, no wind	32	243.4	--	259.2	--	275.0	--		
No ice, no wind	60	221.5	4903	236.1	4995	250.7	5087		
No ice, no wind	100	227.9	4765	242.7	4859	257.5	4954		
Light-Final									
No ice, no wind	60	217.5	4982	231.6	5084	245.8	5185	259.9	5285
No ice, no wind	100	224.2	4843	238.3	4945	252.5	5048	266.7	5151

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.80 Pounds per foot with Diameter 1.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	258.6	5696	272.9	5790	287.3	5885
No ice, no wind	20	261.7	5628	276.2	5725	290.7	5821
No ice, no wind	40	264.9	5565	279.4	5662	294.1	5760
No ice, no wind	60	268.0	5500	282.7	5599	297.4	5697
No ice, no wind	80	271.2	5435	285.9	5535	300.6	5634
No ice, no wind	100	274.4	5372	289.2	5473	304.1	5573
Light-Final							
No ice, no wind	60	274.1	5385	289.6	5473	305.1	5560
No ice, no wind	100	280.9	5252	296.7	5341	312.5	5430

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	11.5	2825	16.7	2983	22.9	3138	29.9	3289
No ice, no wind	20	12.1	2706	17.4	2871	23.7	3034	30.9	3190
No ice, no wind	40	12.7	2587	18.2	2758	24.5	2928	31.9	3091
No ice, no wind	60	13.3	2468	18.9	2645	25.5	2822	33.0	2982
No ice, no wind	80	14.0	2353	19.8	2534	26.5	2718	34.2	2887
No ice, no wind	100	14.8	2242	20.8	2435	27.6	2617	35.5	2792
Heavy-Final									
1/2" ice, no wind	32	18.5	--	26.0	--	34.6	--	44.1	--
No ice, no wind	60	13.8	2401	19.7	2569	26.7	2734	34.8	2895
No ice, no wind	100	15.4	2165	21.7	2345	28.9	2520	37.3	2691
Medium-Final									
1/4" ice, no wind	32	15.6	--	22.2	--	29.8	--	38.2	--
No ice, no wind	60	13.6	2426	19.4	2595	26.1	2762	33.8	2927
No ice, no wind	100	15.1	2190	21.3	2381	28.3	2563	36.4	2738
Light-Final									
No ice, no wind	60	13.4	2440	19.1	2609	25.8	2777	33.4	2944
No ice, no wind	100	15.0	2202	21.1	2393	28.0	2576	36.0	2754

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	37.8	3437	46.3	3583	55.4	3728	65.0	3871
No ice, no wind	20	38.9	3343	47.5	3494	56.8	3642	66.4	3788
No ice, no wind	40	40.0	3249	48.7	3404	58.2	3556	67.9	3706
No ice, no wind	60	41.3	3153	50.1	3314	59.7	3471	69.5	3623
No ice, no wind	80	42.7	3057	51.6	3224	61.3	3385	71.1	3540
No ice, no wind	100	44.0	2963	53.1	3134	62.9	3300	72.7	3457
Heavy-Final									
1/2" ice, no wind	32	54.4	--	65.3	--	77.0	--	89.0	--
No ice, no wind	60	43.3	3050	52.2	3202	61.8	3354	71.8	3499
No ice, no wind	100	46.1	2860	55.3	3025	65.2	3187	75.3	3341
Medium-Final									
1/4" ice, no wind	32	47.3	--	57.0	--	67.4	--	78.0	--
No ice, no wind	60	42.4	3090	51.1	3250	60.8	3409	70.5	3560
No ice, no wind	100	45.0	2907	54.3	3072	64.2	3233	74.2	3386
Light-Final									
No ice, no wind	60	41.8	3108	50.7	3269	60.4	3431	69.8	3581
No ice, no wind	100	44.6	2926	53.8	3092	63.7	3256	73.5	3413

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	74.8	4015	84.8	4157	95.1	4298	105.7	4436
No ice, no wind	20	76.3	3934	86.3	4076	96.7	4218	107.5	4360
No ice, no wind	40	77.9	3853	88.0	3997	98.5	4141	109.5	4283
No ice, no wind	60	79.5	3773	89.8	3918	100.5	4063	111.5	4206
No ice, no wind	80	81.2	3692	91.6	3840	102.5	3986	113.5	4129
No ice, no wind	100	82.9	3611	93.4	3763	104.3	3910	115.5	4055
Heavy-Final									
1/2" ice, no wind	32	101.5	--	114.6	--	128.0	--	141.6	--
No ice, no wind	60	82.3	3643	93.3	3780	104.6	3916	116.1	4043
No ice, no wind	100	86.1	3492	97.3	3638	108.7	3776	120.2	3907
Medium-Final									
1/4" ice, no wind	32	89.1	--	100.4	--	112.2	--	124.4	--
No ice, no wind	60	80.6	3707	91.0	3853	102.0	3996	113.1	4134
No ice, no wind	100	84.5	3537	95.2	3686	106.2	3833	117.6	3976
Light-Final									
No ice, no wind	60	80.0	3735	90.2	3882	101.0	4027	112.0	4168
No ice, no wind	100	83.7	3568	94.2	3719	105.2	3867	116.6	4010

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	116.7	4573	128.1	4707	139.7	4840	151.4	4969
No ice, no wind	20	118.7	4497	130.1	4635	141.7	4766	153.5	4896
No ice, no wind	40	120.7	4420	132.3	4563	144.0	4695	155.7	4823
No ice, no wind	60	122.9	4345	134.5	4482	146.3	4620	158.1	4752
No ice, no wind	80	125.0	4271	136.7	4411	148.6	4549	160.5	4682
No ice, no wind	100	127.0	4199	138.7	4340	150.8	4481	162.7	4613
Heavy-Final									
1/2" ice, no wind	32	156.0	—	170.9	--	186.1	--		
No ice, no wind	60	128.3	4167	140.6	4283	153.8	4394		
No ice, no wind	100	132.3	4031	145.5	4147	159.0	4255		
Medium-Final									
1/4" ice, no wind	32	137.2	--	150.2	--	163.9	--	177.5	--
No ice, no wind	60	124.8	4269	136.8	4399	149.3	4525	162.1	4647
No ice, no wind	100	129.5	4115	141.7	4249	154.4	4380	167.3	4505
Light-Final									
No ice, no wind	60	123.6	4304	135.5	4437	148.0	4570	160.4	4696
No ice, no wind	100	128.3	4149	140.5	4286	153.0	4421	165.3	4549

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	163.5	5095	176.0	5217	189.6	5337	203.4	5451
No ice, no wind	20	165.7	5024	178.4	5149	192.0	5269	205.9	5383
No ice, no wind	40	168.0	4953	180.8	5079	194.4	5200	208.4	5316
No ice, no wind	60	170.4	4882	183.2	5008	196.8	5132	210.9	5249
No ice, no wind	80	172.8	4812	185.7	4939	199.4	5063	213.4	5181
No ice, no wind	100	175.1	4743	188.2	4869	202.2	4995	216.4	5114
Medium-Final									
1/4" ice, no wind	32	191.7	--	206.3	--	221.4	--	237.9	--
No ice, no wind	60	175.4	4743	189.1	4869	202.8	4992	218.1	5089
No ice, no wind	100	180.7	4627	194.5	4743	208.2	4854	224.0	4953
Light-Final									
No ice, no wind	60	173.1	4821	186.2	4943	199.4	5063	214.1	5170
No ice, no wind	100	178.4	4676	191.7	4800	205.8	4924	220.5	5033

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	217.2	5565	231.0	5679	244.8	5794	258.6	5909
No ice, no wind	20	219.8	5498	233.7	5613	247.6	5728	261.5	5843
No ice, no wind	40	222.4	5432	236.4	5548	250.4	5664	264.4	5780
No ice, no wind	60	225.0	5366	239.1	5483	253.2	5600	267.3	5717
No ice, no wind	80	227.5	5299	241.7	5417	255.9	5535	270.1	5653
No ice, no wind	100	230.6	5233	244.8	5352	259.0	5471	273.2	5590
Medium-Final									
1/4" ice, no wind	32	254.4	--						
No ice, no wind	60	233.4	5186						
No ice, no wind	100	239.5	5052						
Light-Final									
No ice, no wind	60	228.8	5277	243.6	5385	258.4	5493	273.2	5601
No ice, no wind	100	235.3	5142	250.1	5251	264.9	5360	279.7	5469

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		700-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	272.4	6024
No ice, no wind	20	275.4	5958
No ice, no wind	40	278.4	5897
No ice, no wind	60	281.4	5835
No ice, no wind	80	284.4	5771
No ice, no wind	100	287.4	5710
Light-Final			
No ice, no wind	60	288.0	5709
No ice, no wind	100	294.5	5579

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.20 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	12.3	2879	17.8	3052	24.3	3221	31.7	3385
No ice, no wind	20	12.9	2763	18.5	2942	25.1	3119	32.6	3288
No ice, no wind	40	13.5	2646	19.3	2832	25.9	3014	33.6	3190
No ice, no wind	60	14.1	2530	20.0	2721	26.9	2910	34.7	3085
No ice, no wind	80	14.7	2418	20.9	2613	27.9	2808	35.9	2991
No ice, no wind	100	15.5	2309	21.8	2514	29.0	2709	37.1	2897
Heavy-Final									
1/2" ice, no wind	32	19.1	--	26.9	--	35.8	--	45.6	--
No ice, no wind	60	14.6	2463	20.8	2644	28.1	2823	36.4	2998
No ice, no wind	100	16.1	2233	22.7	2426	30.2	2616	38.9	2800
Medium-Final									
1/4" ice, no wind	32	16.3	--	23.1	--	31.0	--	39.7	--
No ice, no wind	60	14.3	2488	20.5	2673	27.5	2855	35.5	3033
No ice, no wind	100	15.8	2258	22.3	2463	29.7	2658	38.1	2846
Light-Final									
No ice, no wind	60	14.2	2503	20.2	2687	27.2	2869	35.1	3049
No ice, no wind	100	15.8	2271	22.1	2475	29.4	2672	37.7	2862

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	39.9	3546	48.7	3704	58.0	3861	67.9	4015
No ice, no wind	20	40.9	3454	49.8	3617	59.4	3776	69.3	3934
No ice, no wind	40	42.0	3361	51.0	3528	60.8	3692	70.8	3853
No ice, no wind	60	43.3	3267	52.4	3440	62.2	3608	72.3	3772
No ice, no wind	80	44.7	3173	53.9	3352	63.8	3524	73.9	3690
No ice, no wind	100	45.9	3082	55.3	3264	65.3	3441	75.5	3608
Heavy-Final									
1/2" ice, no wind	32	56.1	--	67.2	--	79.1	--	91.3	--
No ice, no wind	60	45.2	3166	54.4	3330	64.3	3492	74.6	3647
No ice, no wind	100	47.9	2981	57.5	3157	67.7	3329	78.1	3491
Medium-Final									
1/4" ice, no wind	32	49.1	--	59.1	--	69.8	--	80.7	--
No ice, no wind	60	44.4	3207	53.4	3378	63.4	3547	73.4	3708
No ice, no wind	100	46.9	3027	56.5	3203	66.7	3375	77.0	3539
Light-Final									
No ice, no wind	60	43.8	3225	53.0	3398	62.9	3570	72.7	3731
No ice, no wind	100	46.5	3046	56.1	3224	66.2	3398	76.3	3566

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.20 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	78.0	4169	88.3	4322	99.0	4473	110.0	4620
No ice, no wind	20	79.5	4090	89.9	4243	100.6	4395	111.8	4546
No ice, no wind	40	81.1	4011	91.5	4166	102.4	4319	113.7	4469
No ice, no wind	60	82.7	3933	93.3	4088	104.3	4242	115.7	4394
No ice, no wind	80	84.3	3852	95.0	4011	106.3	4167	117.6	4319
No ice, no wind	100	86.0	3773	96.8	3935	108.0	4092	119.6	4246
Heavy-Final									
1/2" ice, no wind	32	104.1	--	117.5	--	131.4	--	145.7	--
No ice, no wind	60	85.5	3800	96.8	3944	108.6	4084	120.9	4213
No ice, no wind	100	89.2	3649	100.8	3801	112.7	3944	125.0	4076
Medium-Final									
1/4" ice, no wind	32	92.1	--	103.7	--	115.9	--	128.4	--
No ice, no wind	60	83.9	3865	94.6	4020	105.9	4172	117.4	4316
No ice, no wind	100	87.6	3700	98.7	3858	110.0	4013	121.8	4163
Light-Final									
No ice, no wind	60	83.2	3895	93.8	4052	105.0	4206	116.3	4356
No ice, no wind	100	86.9	3731	97.7	3892	109.0	4049	120.8	4200

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	121.4	4765	133.2	4908	145.2	5048	157.5	5182
No ice, no wind	20	123.3	4692	135.1	4837	147.2	4976	159.6	5111
No ice, no wind	40	125.3	4616	137.3	4765	149.4	4906	161.7	5040
No ice, no wind	60	127.4	4543	139.4	4687	151.7	4833	164.1	4971
No ice, no wind	80	129.5	4470	141.6	4617	153.9	4763	166.4	4902
No ice, no wind	100	131.4	4399	143.6	4547	156.1	4695	168.6	4833
Heavy-Final									
1/2" ice, no wind	32	160.6	--	176.0					
No ice, no wind	60	133.7	4339	146.6	4459				
No ice, no wind	100	138.1	4204	151.4	4324				
Medium-Final									
1/4" ice, no wind	32	141.6	--	155.0	--	169.3	--	183.6	--
No ice, no wind	60	129.5	4457	142.0	4591	155.1	4725	168.5	4850
No ice, no wind	100	134.1	4308	146.8	4447	160.0	4582	173.6	4709
Light-Final									
No ice, no wind	60	128.3	4501	140.6	4641	153.5	4779	166.5	4910
No ice, no wind	100	132.9	4347	145.4	4491	158.4	4632	171.3	4765

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.20 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	170.1	5314	183.0	5443	196.9	5571	211.2	5690
No ice, no wind	20	172.3	5246	185.4	5377	199.2	5505	213.6	5624
No ice, no wind	40	174.5	5176	187.7	5309	201.6	5438	216.0	5559
No ice, no wind	60	176.9	5107	190.1	5240	203.9	5372	218.5	5494
No ice, no wind	80	179.2	5039	192.5	5173	206.4	5305	220.9	5428
No ice, no wind	100	181.5	4971	195.0	5105	209.2	5239	223.8	5363
Medium-Final									
1/4" ice, no wind	32	198.4	--	213.5	--	229.0	--		
No ice, no wind	60	182.4	4953	196.6	5081	210.8	5206		
No ice, no wind	100	187.6	4835	202.0	4955	216.2	5072		
Light-Final									
No ice, no wind	60	179.7	5040	193.3	5167	206.9	5293	222.1	5404
No ice, no wind	100	184.9	4897	198.6	5027	213.0	5157	228.3	5270

Span Length		600-ft.		625-ft.		650-ft.	
Initial							
No ice, no wind	0	225.5	5809	239.8	5928	254.1	6048
No ice, no wind	20	228.0	5745	242.4	5865	256.8	5985
No ice, no wind	40	230.5	5680	245.0	5802	159.5	5923
No ice, no wind	60	233.0	5617	247.6	5739	262.2	5861
No ice, no wind	80	235.5	5552	250.2	5675	264.8	5795
No ice, no wind	100	238.5	5488	253.1	5612	267.8	5737
Light-Final							
No ice, no wind	60	237.4	5516	252.7	5628	268.0	5740
No ice, no wind	100	243.6	5383	259.0	5496	274.3	5610

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.40 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	13.1	2933	18.9	3121	25.7	3304	33.5	3482
No ice, no wind	20	13.7	2820	19.6	3013	26.5	3204	34.4	3386
No ice, no wind	40	14.3	2705	20.4	2906	27.3	3101	35.4	3290
No ice, no wind	60	14.9	2592	21.1	2797	28.3	2999	36.4	3188
No ice, no wind	80	15.5	2483	22.0	2692	29.3	2899	37.6	3095
No ice, no wind	100	16.2	2377	22.8	2594	30.4	2801	38.8	3003
Heavy-Final									
1/2" ice, no wind	32	19.7	--	27.9	--	37.1	--	47.1	--
No ice, no wind	60	15.4	2525	21.9	2720	29.5	2912	38.0	3101
No ice, no wind	100	16.8	2301	23.7	2508	31.6	2712	40.5	2909
Medium-Final									
1/4" ice, no wind	32	17.0	--	24.0	--	32.2	--	41.2	--
No ice, no wind	60	15.1	2550	21.6	2752	28.9	2948	37.2	3139
No ice, no wind	100	16.6	2326	23.3	2546	31.1	2753	39.8	2954
Light-Final									
No ice, no wind	60	15.0	2567	21.3	2765	28.6	2961	36.8	3154
No ice, no wind	100	16.5	2340	23.1	2557	30.8	2768	39.4	2970

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	42.0	3655	51.1	3826	60.7	3994	70.8	4159
No ice, no wind	20	43.0	3565	52.2	3740	62.0	3911	72.2	4080
No ice, no wind	40	44.1	3473	53.4	3652	63.4	3828	73.3	4000
No ice, no wind	60	45.3	3381	54.7	3566	64.8	3745	75.2	3921
No ice, no wind	80	46.7	3289	56.2	3480	66.3	3663	76.7	3840
No ice, no wind	100	47.8	3201	57.5	3395	67.7	3582	78.3	3759
Heavy-Final									
1/2" ice, no wind	32	57.8	--	69.2	--	81.2	--	93.7	--
No ice, no wind	60	47.1	3282	56.7	3458	66.9	3631	77.5	3796
No ice, no wind	100	49.8	3102	59.7	3289	70.2	3471	80.9	3642
Medium-Final									
1/4" ice, no wind	32	50.9	--	61.2	--	72.2	--	83.4	--
No ice, no wind	60	46.4	3324	55.7	3506	66.0	3685	76.3	3857
No ice, no wind	100	48.8	3147	58.7	3334	69.2	3517	79.8	3692
Light-Final									
No ice, no wind	60	45.8	3343	55.3	3527	65.5	3709	75.7	3881
No ice, no wind	100	48.5	3166	58.4	3356	68.7	3541	79.2	3720

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.40 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	81.2	4324	91.9	4487	102.9	4648	114.3	4804
No ice, no wind	20	82.7	4247	93.5	4411	104.5	4573	116.1	4732
No ice, no wind	40	84.3	4169	95.1	4335	106.3	4498	117.9	4655
No ice, no wind	60	85.9	4093	96.8	4258	108.2	4423	119.9	4582
No ice, no wind	80	87.4	4012	98.5	4182	110.1	4348	121.7	4509
No ice, no wind	100	89.1	3935	100.2	4107	111.8	4274	123.7	4438
Heavy-Final									
1/2" ice, no wind	32	106.7	--	120.4	--	134.8	--	149.8	--
No ice, no wind	60	88.7	3957	100.4	4108	112.6	4252	125.7	4383
No ice, no wind	100	92.3	3807	104.3	3965	116.7	4112	129.8	4246
Medium-Final									
1/4" ice, no wind	32	95.1	--	107.1	--	119.6	--	132.4	--
No ice, no wind	60	87.2	4023	98.2	4187	109.9	4348	121.7	4498
No ice, no wind	100	90.8	3863	102.2	4030	113.9	4193	126.0	4350
Light-Final									
No ice, no wind	60	86.5	4055	97.4	4222	109.0	4385	120.7	4544
No ice, no wind	100	90.1	3895	101.2	4065	112.9	4231	125.0	4390

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	126.1	4958	138.3	5109	150.7	5256	163.6	5395
No ice, no wind	20	127.9	4887	140.2	5039	152.7	5186	165.7	5327
No ice, no wind	40	129.9	4812	142.3	4967	154.8	5117	167.7	5257
No ice, no wind	60	131.9	4741	144.4	4892	157.1	5046	170.1	5190
No ice, no wind	80	134.0	4669	146.5	4823	159.2	4977	172.3	5122
No ice, no wind	100	135.9	4599	148.5	4754	161.4	4909	174.5	5054
Heavy-Final									
1/2" ice, no wind	32	165.3	--						
No ice, no wind	60	139.1	4511						
No ice, no wind	100	143.4	4377						
Medium-Final									
1/4" ice, no wind	32	146.0	--	159.9	--	174.7	--	189.7	--
No ice, no wind	60	134.2	4645	147.2	4784	160.9	4926	175.0	5053
No ice, no wind	100	138.7	4501	151.9	4645	165.7	4784	180.0	4914
Light-Final									
No ice, no wind	60	133.0	4698	145.7	4845	159.0	4988	172.6	5124
No ice, no wind	100	137.5	4546	150.4	4696	163.8	4843	177.3	4981

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.40 Pounds per foot with Diameter 2.00 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	176.7	5534	190.1	5670	204.2	5805	219.0	5929
No ice, no wind	20	178.9	5468	192.4	5606	206.5	5741	221.3	5866
No ice, no wind	40	181.3	5400	194.6	5540	208.8	5677	223.7	5803
No ice, no wind	60	183.4	5332	197.0	5473	211.0	5612	226.1	5740
No ice, no wind	80	185.6	5266	199.3	5407	213.5	5547	228.4	5676
No ice, no wind	100	187.9	5199	201.8	5341	216.2	5483	231.2	5612
Medium-Final									
1/4" ice, no wind	32	205.1	—						
No ice, no wind	60	189.4	5163						
No ice, no wind	100	194.6	5043						
Light-Final									
No ice, no wind	60	186.3	5259	200.4	5391	214.4	5524	230.1	5639
No ice, no wind	100	191.4	5118	205.6	5254	220.3	5390	236.1	5507

Span Length		600-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	233.8	6053
No ice, no wind	20	236.2	5992
No ice, no wind	40	238.6	5929
No ice, no wind	60	241.1	5868
No ice, no wind	80	243.5	5805
No ice, no wind	100	246.4	5743
Light-Final			
No ice, no wind	60	246.0	5755
No ice, no wind	100	252.0	5624

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.60 Pounds per foot with Diameter 2.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	13.9	2987	20.0	3190	27.2	3387	35.3	3579
No ice, no wind	20	14.5	2877	20.7	3085	28.0	3289	36.2	3484
No ice, no wind	40	15.1	2764	21.5	2980	28.8	3188	37.2	3390
No ice, no wind	60	15.7	2654	22.2	2873	29.7	3088	38.2	3291
No ice, no wind	80	16.3	2548	23.1	2771	30.7	2990	39.3	3199
No ice, no wind	100	17.0	2445	23.9	2674	31.8	2894	40.5	3109
Heavy-Final									
1/2" ice, no wind	32	20.3	--	28.9	--	38.4	--	48.6	--
No ice, no wind	60	16.2	2587	23.0	2796	30.9	3002	39.6	3204
No ice, no wind	100	17.6	2369	24.7	2590	33.0	2808	42.1	3018
Medium-Final									
1/4" ice, no wind	32	17.7	--	25.0	--	33.5	--	42.7	--
No ice, no wind	60	15.9	2612	22.7	2831	30.3	3041	38.9	3245
No ice, no wind	100	17.4	2395	24.3	2629	32.5	2849	41.5	3062
Light-Final									
No ice, no wind	60	15.8	2631	22.4	2843	30.0	3053	38.6	3259
No ice, no wind	100	17.2	2409	24.1	2640	32.2	2864	41.1	3079
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	44.1	3765	53.5	3948	63.4	4127	73.8	4304
No ice, no wind	20	45.1	3676	54.6	3863	64.6	4046	75.1	4226
No ice, no wind	40	46.2	3585	55.8	3776	66.0	3964	76.6	4147
No ice, no wind	60	47.3	3495	57.0	3693	67.4	3883	78.1	4070
No ice, no wind	80	48.7	3406	58.5	3609	68.8	3802	79.5	3990
No ice, no wind	100	49.8	3320	59.8	3526	70.2	3723	81.8	3911
Heavy-Final									
1/2" ice, no wind	32	59.5	--	71.2	--	83.3	--	96.1	--
No ice, no wind	60	49.0	3398	59.0	3586	69.5	3770	80.4	3945
No ice, no wind	100	51.7	3223	61.9	3422	72.7	3613	83.7	3793
Medium-Final									
1/4" ice, no wind	32	52.7	--	63.3	--	74.6	--	86.1	--
No ice, no wind	60	48.4	3441	58.0	3635	68.6	3823	79.2	4006
No ice, no wind	100	50.8	3267	61.0	3465	71.7	3659	82.6	3845
Light-Final									
No ice, no wind	60	47.8	3461	57.6	3656	68.1	3848	78.7	4031
No ice, no wind	100	50.5	3286	60.7	3490	71.2	3684	82.1	3874

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.60 Pounds per foot with Diameter 2.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	84.5	4479	95.5	4652	106.8	4823	118.6	4988
No ice, no wind	20	85.9	4404	97.1	4579	180.5	4751	120.4	4918
No ice, no wind	40	87.5	4328	98.7	4504	110.2	4677	122.2	4842
No ice, no wind	60	89.1	4253	100.3	4428	112.1	4603	124.1	4770
No ice, no wind	80	90.6	4173	102.0	4353	113.9	4530	125.9	4699
No ice, no wind	100	92.2	4097	103.6	4279	115.6	4456	127.8	4630
Heavy-Final									
1/2" ice, no wind	32	109.4	--	123.4	--	138.2	--	153.9	--
No ice, no wind	60	91.9	4114	104.0	4272	116.7	4421	130.5	4553
No ice, no wind	100	95.4	3965	107.8	4129	120.7	4280	134.6	4416
Medium-Final									
1/4" ice, no wind	32	98.1	--	110.5	--	123.3	--	136.5	--
No ice, no wind	60	90.5	4182	101.9	4354	113.9	4524	126.1	4680
No ice, no wind	100	94.0	4026	105.7	4202	117.8	4373	130.2	4537
Light-Final									
No ice, no wind	60	89.8	4215	101.1	4392	113.0	4564	125.1	4733
No ice, no wind	100	93.3	4059	104.8	4238	16.82	4413	129.2	4581
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	130.8	5151	143.4	5310	156.2	5464	169.7	5609
No ice, no wind	20	132.6	5082	145.3	5241	158.2	5396	171.8	5543
No ice, no wind	40	134.5	5009	147.3	5170	160.2	5328	173.8	5475
No ice, no wind	60	136.5	4939	149.4	5097	162.5	5259	176.1	5409
No ice, no wind	80	138.5	4868	151.4	5030	164.6	5191	178.2	5342
No ice, no wind	100	140.4	4799	153.4	4962	166.8	5123	180.5	5275
Medium-Final									
1/4" ice, no wind	32	150.4	--	164.8	--	180.1	--	195.8	--
No ice, no wind	60	138.9	4833	152.4	4977	166.7	5127	181.5	5256
No ice, no wind	100	143.3	4694	157.0	4843	171.4	4986	186.4	5119
Light-Final									
No ice, no wind	60	137.7	4895	150.8	5049	164.5	5198	178.7	5338
No ice, no wind	100	142.1	4745	155.4	4902	169.2	5054	183.3	5197

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.60 Pounds per foot with Diameter 2.10 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	183.3	5754	197.2	5897	211.5	6039	226.8	6168
No ice, no wind	20	185.5	5690	199.4	5835	213.8	5978	229.1	6108
No ice, no wind	40	187.6	5624	201.6	5771	216.0	5916	231.4	6047
No ice, no wind	60	189.9	5557	203.9	5706	218.2	5853	233.7	5986
No ice, no wind	80	192.0	5493	206.1	5641	220.6	5789	236.0	5924
No ice, no wind	100	194.4	5427	208.6	5577	223.2	5727	238.7	5862
Light-Final									
No ice, no wind	60	192.9	5478	207.5	5616	221.9	5755	238.2	5874
No ice, no wind	100	197.9	5339	212.6	5481	227.6	5623	243.9	5744

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.80 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	14.7	3042	21.1	3259	28.7	3471	37.1	3676
No ice, no wind	20	15.3	2935	21.8	3157	29.5	3374	38.0	3583
No ice, no wind	40	15.9	2824	22.6	3054	30.3	3275	39.0	3490
No ice, no wind	60	16.5	2717	23.3	2950	31.2	3177	40.0	3394
No ice, no wind	80	17.1	2613	24.2	2850	32.2	3081	41.1	3303
No ice, no wind	100	17.8	2513	25.0	2754	33.2	2987	42.2	3215
Heavy-Final									
1/2" ice, no wind	32	21.0	--	29.9	--	39.7	--	50.1	--
No ice, no wind	60	17.0	2649	24.1	2872	32.3	3092	41.3	3307
No ice, no wind	100	18.4	2437	25.7	2672	34.4	2904	43.7	3128
Medium-Final									
1/4" ice, no wind	32	18.4	--	26.0	--	34.8	--	44.2	--
No ice, no wind	60	16.7	2675	23.8	2910	31.8	3134	40.7	3351
No ice, no wind	100	18.2	2464	25.4	2712	33.9	2945	43.2	3170
Light-Final									
No ice, no wind	60	16.6	2695	23.5	2921	31.5	3145	40.4	3364
No ice, no wind	100	18.0	2478	25.2	2723	33.6	2960	42.8	3188

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	46.2	3875	55.9	4070	66.1	4260	76.8	4449
No ice, no wind	20	47.2	3787	57.0	3986	67.3	4181	78.1	4372
No ice, no wind	40	48.3	3697	58.2	3901	68.6	4100	79.5	4295
No ice, no wind	60	49.4	3610	59.4	3820	70.0	4021	81.0	4219
No ice, no wind	80	50.7	3523	60.8	3738	71.4	3942	82.4	4140
No ice, no wind	100	51.8	3439	62.1	3657	72.7	3864	83.9	4062
Heavy-Final									
1/2" ice, no wind	32	61.3	--	73.2	--	85.5	--	98.5	--
No ice, no wind	60	50.9	3514	61.3	3715	72.1	3909	83.3	4094
No ice, no wind	100	53.6	3345	64.1	3555	75.2	3755	86.5	3944
Medium-Final									
1/4" ice, no wind	32	54.5	--	65.5	--	77.0	--	88.9	--
No ice, no wind	60	50.4	3559	60.4	3764	71.2	3962	82.2	4155
No ice, no wind	100	52.8	3387	63.3	3596	74.2	3801	85.5	3998
Light-Final									
No ice, no wind	60	49.9	3579	60.0	3786	70.7	3987	81.7	4182
No ice, no wind	100	52.5	3407	63.0	3622	73.8	3827	85.0	4028

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.80 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	14.7	3042	21.1	3259	28.7	3471	37.1	3676
No ice, no wind	20	15.3	2935	21.8	3157	29.5	3374	38.0	3588
No ice, no wind	40	15.9	2824	22.6	3054	30.3	3275	39.0	3490
No ice, no wind	60	16.5	2717	23.3	2950	31.2	3177	40.0	3394
No ice, no wind	80	17.1	2613	24.2	2850	32.2	3081	41.1	3303
No ice, no wind	100	17.8	2513	25.0	2754	33.2	2987	42.2	3215
Heavy-Final									
1/2" ice, no wind	32	21.0	--	29.9	--	39.7	--	50.1	--
No ice, no wind	60	17.0	2649	24.1	2872	32.3	3092	41.3	3307
No ice, no wind	100	18.4	2437	25.7	2672	34.4	2904	43.7	3128
Medium-Final									
1/4" ice, no wind	32	18.4	--	26.0	--	34.8	--	44.2	--
No ice, no wind	60	16.7	2675	23.8	2910	31.8	3134	40.7	3351
No ice, no wind	100	18.2	2464	25.4	2712	33.9	2945	43.2	3170
Light-Final									
No ice, no wind	60	16.6	2695	23.5	2921	31.5	3145	40.4	3364
No ice, no wind	100	18.0	2478	25.2	2723	33.6	2960	42.8	3188

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	46.2	3875	55.9	4070	66.1	4260	76.8	4449
No ice, no wind	20	47.2	3787	57.0	3986	67.3	4181	78.1	4372
No ice, no wind	40	48.3	3697	58.2	3901	68.6	4100	79.5	4295
No ice, no wind	60	49.4	3610	59.4	3820	70.0	4021	81.0	4219
No ice, no wind	80	50.7	3523	60.8	3738	71.4	3942	82.4	4140
No ice, no wind	100	51.8	3439	62.1	3657	72.7	3864	83.9	4062
Heavy-Final									
1/2" ice, no wind	32	61.3	--	73.2	--	85.5	--	98.5	--
No ice, no wind	60	50.9	3514	61.3	3715	72.1	3909	83.3	4094
No ice, no wind	100	53.6	3345	64.1	3555	75.2	3755	86.5	3944
Medium-Final									
1/4" ice, no wind	32	54.5	--	65.5	--	77.0	--	88.9	--
No ice, no wind	60	50.4	3559	60.4	3764	71.2	3962	82.2	4155
No ice, no wind	100	52.8	3387	63.3	3596	74.2	3801	85.5	3998
Light-Final									
No ice, no wind	60	49.9	3579	60.0	3786	70.7	3987	81.7	4182
No ice, no wind	100	52.5	3407	63.0	3622	73.8	3827	85.0	4026

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.80 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	87.8	4634	99.1	4817	110.8	4999	122.9	5172
No ice, no wind	20	89.3	4561	100.7	4747	112.5	4929	124.7	5105
No ice, no wind	40	90.7	4487	102.3	4673	114.2	4856	126.5	5029
No ice, no wind	60	92.3	4413	103.8	4599	16.02	4783	128.3	4958
No ice, no wind	80	93.8	4334	105.5	4524	117.7	4712	130.1	4889
No ice, no wind	100	95.3	4259	107.0	4451	119.4	4638	131.9	4822
Heavy-Final									
1/2" ice, no wind	32	112.1	--	126.4	--	141.7	--		
No ice, no wind	60	95.1	4271	107.6	4436	120.8	4590		
No ice, no wind	100	98.5	4122	111.3	4293	124.7	4448		
Medium-Final									
1/4" ice, no wind	32	101.2	--	113.9	--	127.1	--	140.6	--
No ice, no wind	60	93.8	4341	105.6	4522	117.9	4700	130.5	4863
No ice, no wind	100	97.2	4189	109.3	4374	121.7	4553	134.5	4724
Light-Final									
No ice, no wind	60	93.1	4375	104.8	4562	117.0	4744	129.5	4922
No ice, no wind	100	96.5	4223	108.4	4411	120.7	4595	133.4	4772

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	135.5	5344	148.5	5511	161.8	5672	175.8	5823
No ice, no wind	20	137.2	5277	150.4	5443	163.7	5606	177.9	5759
No ice, no wind	40	139.1	5206	152.3	5373	165.7	5539	179.9	5693
No ice, no wind	60	141.4	5137	154.4	5303	167.9	5472	182.1	5628
No ice, no wind	80	143.0	5068	156.5	5237	170.0	5405	184.2	5562
No ice, no wind	100	144.9	4999	158.3	5170	172.2	5337	186.5	5496
Medium-Final									
1/4" ice, no wind	32	154.8	--	169.7	--	185.5	--		
No ice, no wind	60	143.7	5021	157.6	5170	172.5	5328		
No ice, no wind	100	147.9	4887	162.1	5041	177.1	5188		
Light-Final									
No ice, no wind	60	142.5	5092	156.0	5253	170.0	5408	184.8	5552
No ice, no wind	100	146.7	4944	160.4	5108	174.6	5266	189.4	5413

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.80 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.		525-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial					
No ice, no wind	0	190.0	5974	204.3	6141
No ice, no wind	20	192.1	5912	206.5	6064
No ice, no wind	40	194.2	5848	208.6	6002
No ice, no wind	60	196.4	5783	210.8	5939
No ice, no wind	80	198.5	5720	213.0	5876
No ice, no wind	100	200.9	5655	215.4	5813
Light-Final					
No ice, no wind	60	199.6	5697	214.6	5841
No ice, no wind	100	204.4	5561	219.6	5708

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	15.5	3097	22.3	3329	30.2	3555	38.9	3773
No ice, no wind	20	16.1	2993	23.0	3229	31.0	3459	39.8	3682
No ice, no wind	40	16.7	2884	23.7	3128	31.8	3362	40.8	3590
No ice, no wind	60	17.3	2780	24.5	3027	32.7	3266	41.8	3497
No ice, no wind	80	17.9	2679	25.3	2930	33.7	3172	42.9	3408
No ice, no wind	100	18.6	2581	26.1	2834	34.7	3080	43.9	3321
Heavy-Final									
1/2" ice, no wind	32	21.7	--	30.9	--	41.0	--	51.7	--
No ice, no wind	60	17.8	2712	25.2	2948	33.7	3182	43.0	3410
No ice, no wind	100	19.2	2505	26.7	2754	35.8	3000	45.3	3238
Medium-Final									
1/4" ice, no wind	32	19.1	--	27.0	--	36.1	--	45.8	--
No ice, no wind	60	17.5	2738	24.9	2989	33.3	3227	42.5	3457
No ice, no wind	100	19.0	2533	26.5	2795	35.4	3041	44.9	3278
Light-Final									
No ice, no wind	60	17.4	2759	27.7	3000	33.0	3227	42.2	3470
No ice, no wind	100	18.8	2547	26.3	2806	35.1	3056	44.6	3297

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	48.3	3985	58.3	4192	68.8	4393	79.8	4594
No ice, no wind	20	49.3	3898	59.4	4109	70.0	4316	81.1	4519
No ice, no wind	40	50.4	3810	60.6	4026	71.3	4237	82.5	4443
No ice, no wind	60	51.5	3725	61.8	3947	72.6	4159	83.9	4368
No ice, no wind	80	52.7	3640	63.1	3867	74.0	4082	85.3	4290
No ice, no wind	100	53.8	3558	64.4	3788	75.2	4005	86.7	4215
Heavy-Final									
1/2" ice, no wind	32	63.1	--	75.2	--	87.7	--	100.9	--
No ice, no wind	60	52.9	3631	63.6	3844	74.7	4048	86.2	4243
No ice, no wind	100	55.5	3467	66.4	3688	77.7	3897	89.4	4095
	32	56.3	--	67.7	--	79.5	--	91.7	--
	60	52.4	3677	62.8	3893	73.9	4101	85.2	4304
	00	54.8	3507	65.6	3728	76.8	3943	88.4	4152
	60	52.0	3697	62.4	3916	73.3	4126	84.7	4333
	00	54.5	3528	65.3	3755	76.4	3970	87.9	4182

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	91.1	4789	102.7	4983	114.8	5175	127.3	5357
No ice, no wind	20	92.5	4718	104.3	4915	116.5	5107	129.0	5292
No ice, no wind	40	94.0	4646	105.9	4843	118.2	5035	130.8	5216
No ice, no wind	60	95.5	4573	107.4	4770	119.9	4964	132.5	5147
No ice, no wind	80	97.0	4495	109.0	4696	121.6	4894	134.3	5080
No ice, no wind	100	98.4	4421	110.5	4623	123.2	4821	136.0	5014
Heavy-Final									
1/2" ice, no wind	32	114.8	--	129.4	--	145.2	--		
No ice, no wind	60	98.4	4428	111.2	4600	124.9	4759		
No ice, no wind	100	101.7	4281	114.8	4457	128.8	4617		
Medium-Final									
1/4" ice, no wind	32	104.3	--	11730	--	130.9	--	144.7	--
No ice, no wind	60	97.1	4500	109.3	4690	121.9	4876	134.9	5046
No ice, no wind	100	100.4	4353	112.9	4546	125.6	4733	138.8	4911
Light-Final									
No ice, no wind	60	96.4	4536	108.5	4733	121.0	4924	133.9	5111
No ice, no wind	100	99.7	4387	112.0	4585	124.6	4776	137.7	4963

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	140.2	5537	153.7	5712	167.4	5881	182.0	6037
No ice, no wind	20	142.0	5472	155.5	5646	169.3	5816	184.0	5975
No ice, no wind	40	143.8	5403	157.3	5576	171.2	5720	186.0	5911
No ice, no wind	60	145.7	5335	159.4	5509	173.3	5685	188.1	5847
No ice, no wind	80	147.5	5268	161.3	5444	175.4	5619	190.2	5783
No ice, no wind	100	149.4	5199	163.3	5378	177.6	5551	192.5	5717
Medium-Final									
1/4" ice, no wind	32	159.2	--	174.6	--	190.9	--		
No ice, no wind	60	148.5	5209	162.9	5363	178.3	5529		
No ice, no wind	100	152.6	5080	167.3	5240	182.8	5391		
Light-Final									
No ice, no wind	60	147.3	5289	161.2	5457	175.6	5618	190.9	5767
No ice, no wind	100	151.3	5143	165.4	5314	180.0	5478	195.5	5630

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		500-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	196.7	6194
No ice, no wind	20	198.8	6134
No ice, no wind	40	200.8	6072
No ice, no wind	60	202.9	6009
No ice, no wind	80	205.0	5947
No ice, no wind	100	207.4	5883
Light-Final			
No ice, no wind	60	206.3	5917
No ice, no wind	100	211.0	5783

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.20 Pounds per foot with Diameter 2.30 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	16.1	3154	23.2	3398	31.3	3636	40.2	3864
No ice, no wind	20	16.7	3051	23.9	3300	32.1	3542	41.1	3776
No ice, no wind	40	17.3	2944	24.6	3202	32.9	3448	42.1	3687
No ice, no wind	60	17.9	2842	25.3	3103	33.8	3354	43.1	3596
No ice, no wind	80	18.5	2743	26.1	3008	34.8	3262	44.2	3509
No ice, no wind	100	19.2	2646	26.9	2914	35.7	3172	45.2	3423
Heavy-Final									
1/2" ice, no wind	32	22.2	--	31.5	--	41.8	--	52.7	--
No ice, no wind	60	18.4	2775	26.0	3026	34.8	3272	44.3	3509
No ice, no wind	100	19.8	2571	27.6	2834	36.8	3090	46.6	3339
Medium-Final									
1/4" ice, no wind	32	19.7	--	27.8	--	37.1	--	47.0	--
No ice, no wind	60	18.1	2801	25.7	3065	34.4	3314	43.8	3555
No ice, no wind	100	19.6	2599	27.4	2873	36.4	3131	46.2	3378
Light-Final									
No ice, no wind	60	18.0	2821	25.5	3077	34.1	3326	43.5	3570
No ice, no wind	100	19.4	2613	27.2	2886	36.2	3147	45.8	3397

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	49.9	4088	60.1	4304	70.8	4516	82.0	4727
No ice, no wind	20	50.9	4003	61.2	4224	72.0	4440	83.3	4653
No ice, no wind	40	52.0	3918	62.4	4143	73.3	4363	84.7	4578
No ice, no wind	60	53.1	3834	63.5	4065	74.6	4287	86.1	4505
No ice, no wind	80	54.2	3751	64.8	3986	76.0	4210	87.5	4428
No ice, no wind	100	55.3	3670	66.1	3907	77.2	4134	88.9	4354
Heavy-Final									
1/2" ice, no wind	32	64.4	--	76.8	--	89.6	--	103.2	--
No ice, no wind	60	54.4	3740	65.3	3960	76.8	4171	88.7	4369
No ice, no wind	100	57.0	3578	68.1	3806	79.7	4021	91.8	4224
Medium-Final									
1/4" ice, no wind	32	57.8	--	69.3	--	81.4	--	93.8	--
No ice, no wind	60	53.9	3786	64.5	4011	75.9	4228	87.5	4439
No ice, no wind	100	56.3	3618	67.3	3845	78.8	4069	90.7	4286
Light-Final									
No ice, no wind	60	53.5	3806	64.1	4034	75.2	4253	86.9	4469
No ice, no wind	100	56.0	3639	67.0	3873	78.3	4098	90.1	4318

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.20 Pounds per foot with Diameter 2.30 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tensic in Pound
Initial									
No ice, no wind	0	93.6	4932	105.5	5133	117.9	5331	130.7	5520
No ice, no wind	20	95.0	4862	107.1	5066	119.5	5265	132.4	5456
No ice, no wind	40	96.5	4791	108.7	4995	121.2	5194	134.2	5383
No ice, no wind	60	98.0	4719	110.2	4924	122.9	5125	135.9	5315
No ice, no wind	80	99.5	4642	111.7	4851	124.6	5055	137.6	5249
No ice, no wind	100	100.9	4569	113.2	4779	126.2	4984	139.3	5183
Heavy-Final									
1/2" ice, no wind	32	117.4	--	132.3	--				
No ice, no wind	60	101.2	4560	114.3	4740				
No ice, no wind	100	104.5	4415	117.8	4597				
Medium-Final									
1/4" ice, no wind	32	106.7	--	120.1	--	134.0	--	148.1	--
No ice, no wind	60	99.6	4643	112.1	4838	125.1	5028	138.6	5202
No ice, no wind	100	102.9	4496	115.7	4694	128.8	4886	142.5	5068
Light-Final									
No ice, no wind	60	98.8	4681	111.2	4884	124.0	5082	137.3	5273
No ice, no wind	100	102.2	4533	14.72	4738	127.6	4937	141.1	5127
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	144.1	5702	158.0	5884	172.2	6057	187.0	6220
No ice, no wind	20	145.8	5642	159.8	5819	174.0	5994	188.9	6160
No ice, no wind	40	147.6	5574	161.6	5752	175.9	5930	190.9	6098
No ice, no wind	60	149.5	5507	163.6	5686	177.9	5867	192.9	6036
No ice, no wind	80	151.2	5441	165.5	5622	179.9	5803	195.0	5970
No ice, no wind	100	153.1	5374	167.4	5558	182.1	5737	197.2	5911
Medium-Final									
1/4" ice, no wind	32	163.3	--	179.2	--				
No ice, no wind	60	152.8	5368	167.6	5527				
No ice, no wind	100	156.8	5240	171.9	5405				
Light-Final									
No ice, no wind	60	151.2	5455	165.6	5626	180.4	5792	196.0	5948
No ice, no wind	100	155.1	5311	169.7	5485	184.8	5654	200.5	5812

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.40 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	16.7	3211	24.1	3468	32.4	3717	41.5	3956
No ice, no wind	20	17.3	3109	24.8	3372	33.2	3626	42.4	3870
No ice, no wind	40	17.9	3004	25.5	3276	34.0	3534	43.4	3784
No ice, no wind	60	18.5	2905	26.2	3179	34.9	3442	44.4	3695
No ice, no wind	80	19.1	2807	27.0	3086	35.9	3352	45.5	3610
No ice, no wind	100	19.8	2711	27.7	2994	36.8	3264	46.5	3526
Heavy-Final									
1/2" ice, no wind	32	22.7	--	32.2	--	42.6	--	53.8	--
No ice, no wind	60	19.0	2839	26.8	3104	35.9	3362	45.6	3608
No ice, no wind	100	20.4	2637	28.5	2914	37.9	3181	47.9	3440
Medium-Final									
1/4" ice, no wind	32	20.3	--	28.6	--	38.1	--	48.3	--
No ice, no wind	60	18.7	2865	26.6	3141	35.5	3401	45.1	3653
No ice, no wind	100	20.2	2665	28.3	2951	37.5	3221	47.5	3478
Light-Final									
No ice, no wind	60	18.6	2883	26.3	3154	35.2	3415	44.8	3670
No ice, no wind	100	20.0	2680	28.1	2966	37.3	3238	47.1	3498

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	51.5	3191	61.9	4417	72.8	4639	84.3	4860
No ice, no wind	20	52.5	4109	63.0	4339	74.0	4565	85.6	4787
No ice, no wind	40	53.6	4026	64.2	4260	75.3	4489	87.0	4714
No ice, no wind	60	54.7	3943	65.3	4183	76.6	4415	88.3	4642
No ice, no wind	80	55.8	3862	66.5	4105	78.0	4338	89.7	4566
No ice, no wind	100	56.9	3782	67.8	4027	79.2	4263	91.1	4493
Heavy-Final									
1/2" ice, no wind	32	65.7	--	78.4	--	91.6	--	105.5	--
No ice, no wind	60	55.9	3849	67.1	4076	78.9	4294	91.2	4495
No ice, no wind	100	58.5	3689	69.8	3924	81.7	4145	94.2	4353
Medium-Final									
1/4" ice, no wind	32	59.5	--	70.9	--	83.3	--	96.0	--
No ice, no wind	60	55.4	3895	66.2	4129	77.9	4355	89.8	4575
No ice, no wind	100	57.8	3729	69.0	3963	80.8	4195	93.0	4420
Light-Final									
No ice, no wind	60	55.0	3916	65.8	4152	77.1	4381	89.1	4606
No ice, no wind	100	57.5	4750	68.7	3991	80.2	4226	92.3	4455

TABLE II

Initial Sags and Tensions with Cable in Place, and Final Sags for Ground Clearance Determination of 5/16" (7-wire) Extra High Strength Galvanized Steel Messenger Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable 3.40 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	96.2	5075	108.3	5283	121.0	5487	134.2	5683
No ice, no wind	20	97.6	5006	109.9	5217	122.6	5423	135.8	5620
No ice, no wind	40	99.0	4936	111.5	5147	124.2	5354	137.6	5550
No ice, no wind	60	100.5	4865	113.0	5078	125.9	5286	139.3	5483
No ice, no wind	80	102.0	4789	114.4	5006	127.6	5216	140.9	5418
No ice, no wind	100	103.4	4718	115.9	4935	129.2	5147	142.6	5352
Heavy-Final									
1/2" ice, no wind	32	120.1	--	135.2	--				
No ice, no wind	60	104.1	4692	117.4	4880				
No ice, no wind	100	107.3	4549	120.8	4738				
Medium-Final									
1/4" ice, no wind	32	109.1	--	122.9	--	137.2	--	151.5	--
No ice, no wind	60	102.2	4786	114.9	4986	128.3	5180	142.3	5358
No ice, no wind	100	105.4	4640	118.5	4843	132.0	5039	146.2	5225
Light-Final									
No ice, no wind	60	101.3	4826	113.9	5036	127.0	5240	140.7	5435
No ice, no wind	100	104.7	4679	117.4	4891	130.6	5096	144.5	5291

Span Length		400-ft.		425-ft.		450-ft.	
Initial							
No ice, no wind	0	148.0	5874	162.4	6056	177.0	6233
No ice, no wind	20	149.7	5812	164.1	5993	178.7	6172
No ice, no wind	40	151.4	5746	165.9	5928	180.6	6110
No ice, no wind	60	153.3	5680	167.8	5863	182.5	6049
No ice, no wind	80	155.0	5615	169.7	5801	184.5	5987
No ice, no wind	100	156.8	5549	171.5	5738	186.6	5923
Medium-Final							
1/4" ice, no wind	32	167.4	--				
No ice, no wind	60	157.1	5527				
No ice, no wind	100	161.0	5400				
Light-Final							
No ice, no wind	60	155.1	5622	170.0	5796	185.3	5966
No ice, no wind	100	158.9	5480	174.1	5656	189.6	5830

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.60 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	17.3	3269	25.0	3538	33.5	3798	42.9	4048
No ice, no wind	20	17.9	3167	25.7	3444	34.3	3710	43.8	3964
No ice, no wind	40	18.5	3065	26.4	3350	35.1	3620	44.7	3881
No ice, no wind	60	19.1	2968	27.1	3255	36.0	3530	45.7	3795
No ice, no wind	80	19.7	2871	27.9	3164	37.0	3442	46.8	3711
No ice, no wind	100	20.4	2776	28.6	3074	37.9	3357	47.8	3629
Heavy-Final									
1/2" ice, no wind	32	23.3	--	32.9	--	43.4	--	54.9	--
No ice, no wind	60	19.6	2903	27.7	3182	37.0	3452	46.9	3707
No ice, no wind	100	21.0	2703	29.4	2994	39.0	3272	49.2	3541
Medium-Final									
1/4" ice, no wind	32	20.9	--	29.4	--	39.1	--	49.6	--
No ice, no wind	60	19.4	2929	27.5	3217	36.6	3488	46.4	3751
No ice, no wind	100	20.8	2731	29.2	3029	38.6	3311	48.8	3578
Light-Final									
No ice, no wind	60	19.2	2945	27.2	3231	36.3	3504	46.1	3770
No ice, no wind	100	20.6	2747	29.0	3046	38.4	3329	48.4	3599
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	53.1	4294	63.7	4530	74.8	4762	86.6	4993
No ice, no wind	20	54.1	4215	64.8	4454	76.0	4690	87.9	4922
No ice, no wind	40	55.2	4134	66.0	4377	77.3	4615	89.3	4850
No ice, no wind	60	56.3	4052	67.1	4301	78.6	4543	90.6	4779
No ice, no wind	80	57.4	3973	68.3	4224	80.0	4467	91.9	4704
No ice, no wind	100	58.5	3895	69.5	4147	81.2	4392	93.3	4632
Heavy-Final									
1/2" ice, no wind	32	67.0	--	80.0	--	93.6	--	107.8	--
No ice, no wind	60	57.5	3958	68.9	4193	81.0	4417	93.7	4621
No ice, no wind	100	60.0	3800	71.6	4042	83.8	4269	96.7	4482
Medium-Final									
1/4" ice, no wind	32	60.8	--	72.5	--	85.2	--	98.2	--
No ice, no wind	60	56.9	4004	68.0	4247	79.9	4482	92.1	4711
No ice, no wind	100	59.3	3840	70.8	4081	82.8	4321	95.3	4555
Light-Final									
No ice, no wind	60	56.6	4026	67.5	4271	79.1	4509	91.3	4743
No ice, no wind	100	59.0	3861	70.4	4110	82.1	4354	94.5	4592

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.60 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 6(

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tensi in Poun
Initial									
No ice, no wind	0	98.8	5218	111.1	5433	124.1	5644	137.7	584
No ice, no wind	20	100.2	5151	112.7	5369	125.7	5581	139.3	578
No ice, no wind	40	101.6	5081	114.3	5300	127.3	5514	141.0	571
No ice, no wind	60	103.0	5011	115.8	5232	128.9	5447	142.7	565
No ice, no wind	80	104.5	4937	117.2	5161	130.6	5373	144.3	558
No ice, no wind	100	105.9	4867	118.6	5091	132.2	5310	145.9	552
Heavy-Final									
1/2" ice, no wind	32	122.8	--						
No ice, no wind	60	107.0	4824						
No ice, no wind	100	110.1	4683						
Medium-Final									
1/4" ice, no wind	32	111.6	--	125.7	--	140.4	--	154.9	--
No ice, no wind	60	104.8	4929	117.8	5134	131.6	5332	146.0	5515
No ice, no wind	100	108.0	4784	121.3	4992	135.2	5192	149.9	5382
Light-Final									
No ice, no wind	60	103.8	4972	116.6	5188	130.1	5398	144.1	5597
No ice, no wind	100	107.2	4826	120.2	5044	133.7	5255	147.9	5456

Span Length		400-ft.		425-ft.		450-ft.	
Initial							
No ice, no wind	0	151.9	6043	166.8	6228	181.8	6410
No ice, no wind	20	153.6	5982	168.4	6167	183.4	6351
No ice, no wind	40	155.3	5918	170.2	6104	185.3	6291
No ice, no wind	60	157.1	5853	172.1	6041	187.2	6231
No ice, no wind	80	158.8	5789	173.9	5980	189.1	6171
No ice, no wind	100	160.5	5724	175.7	5919	191.1	6109
Light-Final							
No ice, no wind	60	159.0	5789	174.4	5966	190.2	6140
No ice, no wind	100	162.8	5649	178.5	5828	194.4	6006

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.80 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	18.0	3327	25.9	3608	34.6	3879	44.3	4140
No ice, no wind	20	18.5	3226	26.6	3516	35.5	3794	45.2	4059
No ice, no wind	40	19.1	3126	27.3	3424	36.3	3706	46.1	3978
No ice, no wind	60	19.7	3031	28.0	3332	37.1	3618	47.1	3895
No ice, no wind	80	20.3	2935	28.8	3243	38.1	3533	48.1	3813
No ice, no wind	100	21.0	2842	29.5	3155	39.0	3450	39.1	3732
Heavy-Final									
1/2" ice, no wind	32	23.9	--	33.6	--	44.3	--	56.0	--
No ice, no wind	60	20.2	2967	28.6	3261	38.1	3542	48.2	3807
No ice, no wind	100	21.6	2769	30.3	3075	40.1	3363	50.5	3642
Medium-Final									
1/4" ice, no wind	32	21.5	--	30.3	--	40.2	--	50.9	--
No ice, no wind	60	20.1	2993	28.4	3293	37.7	3575	47.7	3849
No ice, no wind	100	21.4	2797	30.1	3108	39.7	3401	50.1	3679
Light-Final									
No ice, no wind	60	19.9	3008	28.1	3308	37.4	3593	47.4	3870
No ice, no wind	100	21.3	2814	29.9	3126	39.5	3420	49.7	3700
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	54.7	4397	65.5	4643	76.9	4886	88.9	5126
No ice, no wind	20	55.7	4321	66.6	4569	78.1	4815	90.2	5057
No ice, no wind	40	56.8	4242	67.8	4494	79.4	4742	91.6	4986
No ice, no wind	60	57.9	4162	68.9	4420	80.6	4671	92.9	4916
No ice, no wind	80	59.0	4084	70.1	4343	82.0	4596	94.2	4843
No ice, no wind	100	60.1	4008	71.3	4267	83.2	4521	95.5	4771
Heavy-Final									
1/2" ice, no wind	32	68.4	--	81.6	--	95.6	--	110.1	--
No ice, no wind	60	59.1	4067	70.7	4310	83.2	4540	96.3	4748
No ice, no wind	100	61.5	3911	73.4	4160	85.9	4394	99.2	4612
Medium-Final									
1/4" ice, no wind	32	62.3	--	74.2	--	87.1	--	100.4	--
No ice, no wind	60	58.5	4113	69.8	4365	81.9	4610	94.4	4847
No ice, no wind	100	60.9	3951	72.6	4199	84.9	4447	97.6	4690
Light-Final									
No ice, no wind	60	58.2	4136	69.3	4390	81.1	4637	93.5	4880
No ice, no wind	100	60.6	3973	72.1	4229	84.1	4482	96.7	4729

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.80 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°]

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	101.4	5362	113.9	5584	127.3	5801	141.2	6009
No ice, no wind	20	102.8	5296	115.5	5521	128.8	5739	142.8	5950
No ice, no wind	40	104.2	5226	117.1	5453	130.4	5674	144.4	5884
No ice, no wind	60	105.6	5157	118.6	5386	132.0	5608	146.1	5820
No ice, no wind	80	107.0	5085	120.0	5316	133.6	5540	147.7	5756
No ice, no wind	100	108.4	5016	121.4	5247	135.2	5473	149.2	5692
Heavy-Final									
1/2" ice, no wind	32	125.5	--						
No ice, no wind	60	109.9	4956						
No ice, no wind	100	113.0	4817						
Medium-Final									
1/4" ice, no wind	32	114.1	--	128.5	--	143.6	--		
No ice, no wind	60	107.4	5072	120.7	5282	134.9	5484		
No ice, no wind	100	110.6	4928	124.2	5141	138.5	5346		
Light-Final									
No ice, no wind	60	106.3	5118	119.4	5340	133.2	5556	147.5	5760
No ice, no wind	100	109.7	4973	123.0	5197	136.8	5415	151.3	5621

Span Length		400-ft.		425-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial					
No ice, no wind	0	155.8	6212	171.2	6400
No ice, no wind	20	157.5	6153	172.8	6341
No ice, no wind	40	159.2	6090	174.5	6280
No ice, no wind	60	160.9	6026	176.4	6219
No ice, no wind	80	162.6	5963	178.1	6159
No ice, no wind	100	164.3	5900	179.9	6099
Light-Final					
No ice, no wind	60	162.9	5956	178.9	6136
No ice, no wind	100	166.7	5818	182.9	6000

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.00 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	18.7	3385	26.8	3678	35.8	3960	45.7	4232
No ice, no wind	20	19.2	3285	27.5	3588	36.7	3878	46.6	4154
No ice, no wind	40	19.8	3187	28.2	3498	37.5	3793	47.5	4075
No ice, no wind	60	20.4	3093	28.9	3409	38.3	3707	48.5	3995
No ice, no wind	80	21.0	3000	29.7	3322	39.2	3624	49.5	3915
No ice, no wind	100	21.7	2908	30.4	3236	40.1	3543	50.5	3835
Heavy-Final									
1/2" ice, no wind	32	24.5	--	34.3	--	45.2	--	57.1	--
No ice, no wind	60	20.9	3031	29.5	3340	39.2	3633	49.6	3907
No ice, no wind	100	22.3	2836	31.3	3156	41.2	3454	51.9	3744
Medium-Final									
1/4" ice, no wind	32	22.1	--	31.2	--	41.3	--	52.2	--
No ice, no wind	60	20.8	3057	29.3	3369	38.8	3663	49.1	3948
No ice, no wind	100	22.1	2863	31.1	3187	40.8	3491	51.4	3780
Light-Final									
No ice, no wind	60	20.6	3071	29.0	3385	38.6	3682	48.8	3970
No ice, no wind	100	22.0	2881	30.8	3206	40.6	3511	51.0	3801
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	56.3	4500	67.3	4756	79.0	5010	91.2	5259
No ice, no wind	20	57.4	4427	68.4	4684	80.2	4940	92.5	5192
No ice, no wind	40	58.4	4350	69.6	4612	81.5	4869	93.9	5122
No ice, no wind	60	59.5	4272	70.7	4539	82.7	4799	95.2	5054
No ice, no wind	80	60.6	4195	71.9	4463	84.0	4725	96.5	4982
No ice, no wind	100	61.7	4121	73.1	4387	85.2	4651	97.8	4910
Heavy-Final									
1/2" ice, no wind	32	69.8	--	83.2	--	97.6	--	112.5	--
No ice, no wind	60	60.7	4177	72.5	4427	85.4	4664	98.9	4875
No ice, no wind	100	63.1	4023	75.2	4278	88.0	4519	101.7	4743
Medium-Final									
1/4" ice, no wind	32	63.8	--	75.9	--	89.0	--	102.6	--
No ice, no wind	60	60.1	4222	71.6	4484	84.0	4738	9684	4983
No ice, no wind	100	62.5	4063	74.4	4317	87.0	4573	99.9	4825
Light-Final									
No ice, no wind	60	59.8	4246	71.1	4509	83.1	4765	95.7	5017
No ice, no wind	100	62.2	4085	73.9	4348	86.1	4610	98.9	4866

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.00 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	104.0	5506	116.7	5735	130.5	5958	144.7	6173
No ice, no wind	20	105.4	5441	118.4	5673	131.9	5898	146.3	6115
No ice, no wind	40	106.8	5371	120.0	5606	133.5	5834	147.9	6052
No ice, no wind	60	108.2	5303	121.4	5540	135.1	5769	149.6	5989
No ice, no wind	80	109.6	5233	122.8	5471	136.6	5702	151.1	5926
No ice, no wind	100	111.0	5165	124.2	5404	138.2	5637	152.6	5862
Heavy-Final									
1/2" ice, no wind	32	128.2	--						
No ice, no wind	60	112.8	5089						
No ice, no wind	100	115.9	4952						
Medium-Final									
1/4" ice, no wind	32	116.6	--	131.3	--	146.8	--		
No ice, no wind	60	110.0	5215	123.6	5431	138.2	5636		
No ice, no wind	100	113.2	5072	127.1	5290	141.8	5500		
Light-Final									
No ice, no wind	60	108.8	5264	122.2	5492	136.3	5714	151.0	5923
No ice, no wind	100	112.2	5120	125.8	5350	139.9	5575	154.7	5786

Span Length		400-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	159.8	6381
No ice, no wind	20	161.4	6324
No ice, no wind	40	163.1	6262
No ice, no wind	60	164.8	6199
No ice, no wind	80	166.4	6137
No ice, no wind	100	168.1	6076
Light-Final			
No ice, no wind	60	166.8	6123
No ice, no wind	100	170.6	5987

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.20 Pounds per foot with Diameter 2.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	19.2	3441	27.5	3746	36.7	4039	46.8	4322
No ice, no wind	20	19.7	3342	28.2	3656	37.6	3958	47.7	4245
No ice, no wind	40	20.3	3245	28.9	3567	38.4	3873	48.6	4166
No ice, no wind	60	20.9	3153	29.6	3479	39.1	3789	49.5	4087
No ice, no wind	80	21.5	3060	30.4	3392	40.0	3706	50.5	4008
No ice, no wind	100	22.2	2969	31.1	3306	40.9	3624	51.5	3928
Heavy-Final									
1/2" ice, no wind	32	25.0	--	35.0	--	46.1	--	58.1	--
No ice, no wind	60	21.4	3090	30.2	3410	40.0	3715	50.7	3998
No ice, no wind	100	22.8	2898	32.0	3228	42.0	3538	52.9	3837
Medium-Final									
1/4" ice, no wind	32	22.6	--	31.9	--	42.2	--	53.2	--
No ice, no wind	60	21.3	3117	30.0	3438	39.6	3744	50.2	4039
No ice, no wind	100	22.6	2924	31.7	3258	41.6	3573	52.4	3874
Light-Final									
No ice, no wind	60	21.1	3131	29.7	3455	39.4	3764	49.8	4062
No ice, no wind	100	22.5	2942	31.4	3276	41.4	3593	52.0	3896

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	57.5	4599	68.8	4865	80.7	5127	93.1	5382
No ice, no wind	20	58.6	4526	69.9	4793	81.9	5058	94.4	5317
No ice, no wind	40	59.6	4450	71.0	4722	83.2	4988	95.8	5248
No ice, no wind	60	60.7	4373	72.1	4649	84.4	4919	97.1	5180
No ice, no wind	80	61.8	4296	73.3	4574	85.6	4846	98.4	5110
No ice, no wind	100	62.8	4222	74.5	4499	86.8	4773	99.7	5039
Heavy-Final									
1/2" ice, no wind	32	70.9	--	84.5	--	99.3	--	114.5	--
No ice, no wind	60	62.0	4274	74.1	4531	87.2	4773	100.9	4994
No ice, no wind	100	64.4	4122	76.7	4384	89.8	4629	103.7	4861
Medium-Final									
1/4" ice, no wind	32	65.0	--	77.3	--	90.6	--	104.5	--
No ice, no wind	60	61.3	4322	73.1	4595	85.7	4853	98.7	5104
No ice, no wind	100	63.7	4164	75.8	4429	88.6	4693	101.8	4948
Light-Final									
No ice, no wind	60	61.0	4346	72.5	4619	84.8	4884	97.6	5142
No ice, no wind	100	63.4	4188	75.3	4459	87.7	4731	100.7	4992

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.20 Pounds per foot with Diameter 2.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	106.2	5635	119.4	5867	133.6	6095	148.0	6316
No ice, no wind	20	107.6	5571	121.0	5806	134.9	6036	149.5	6259
No ice, no wind	40	109.0	5502	122.6	5740	136.5	5973	151.1	6198
No ice, no wind	60	110.3	5435	124.0	5676	138.0	5909	152.7	6136
No ice, no wind	80	111.7	5366	125.4	5608	139.5	5844	154.2	6075
No ice, no wind	100	113.1	5299	126.8	5542	141.1	5780	155.7	6012
Medium-Final									
1/4" ice, no wind	32	118.9	—	134.1	—				
No ice, no wind	60	112.3	5337	126.5	5554				
No ice, no wind	100	115.5	5196	130.0	5414				
Light-Final									
No ice, no wind	60	111.0	5394	124.9	5624	139.4	5849	154.4	6064
No ice, no wind	100	114.3	5250	128.4	5483	142.9	5711	158.0	5929

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.40 Pounds per foot with Diameter 2.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	19.7	3497	28.2	3814	37.6	4118	47.9	4412
No ice, no wind	20	20.2	3399	28.9	3724	38.5	4038	48.8	4336
No ice, no wind	40	20.8	3303	29.6	3636	39.3	3954	49.7	4257
No ice, no wind	60	21.4	3212	30.3	3549	40.0	3871	50.6	4179
No ice, no wind	80	22.0	3120	31.1	3462	40.8	3788	51.5	4101
No ice, no wind	100	22.7	3030	31.8	3377	41.7	3706	52.5	4022
Heavy-Final									
1/2" ice, no wind	32	25.5	--	35.7	--	47.0	--	59.1	--
No ice, no wind	60	21.9	3149	30.9	3480	40.9	3793	51.8	4089
No ice, no wind	100	23.3	2960	32.7	3301	42.8	3622	53.9	3931
Medium-Final									
1/4" ice, no wind	32	23.1	--	32.6	--	43.1	--	54.2	--
No ice, no wind	60	21.8	3177	30.7	3508	40.5	3826	51.3	4130
No ice, no wind	100	23.1	2985	32.4	3329	42.4	3655	53.4	3968
Light-Final									
No ice, no wind	60	21.6	3192	30.4	3525	40.3	3846	50.9	4154
No ice, no wind	100	23.0	3003	32.1	3347	42.2	3675	53.0	3991

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	58.8	4698	70.3	4974	82.4	5245	95.1	5505
No ice, no wind	20	59.8	4625	71.4	4903	83.6	5176	96.3	5442
No ice, no wind	40	60.8	4550	72.5	4832	84.9	5107	97.7	5374
No ice, no wind	60	61.9	4474	73.5	4759	86.1	5039	99.0	5306
No ice, no wind	80	63.0	4397	74.7	4685	87.3	4967	100.3	5238
No ice, no wind	100	64.0	4323	75.9	4611	88.5	4895	101.6	5169
Heavy-Final									
1/2" ice, no wind	32	72.0	--	85.8	--	101.0	--		
No ice, no wind	60	63.3	4372	75.7	4635	89.0	4882		
No ice, no wind	100	65.7	4221	78.2	4490	91.6	4739		
Medium-Final									
1/4" ice, no wind	32	66.2	--	78.8	--	92.3	--	106.4	--
No ice, no wind	60	62.6	4422	74.6	4702	87.4	4968	100.7	5226
No ice, no wind	100	64.9	4266	77.2	4542	90.2	4813	103.7	5071
Light-Final									
No ice, no wind	60	62.2	4447	74.0	4729	86.5	5004	99.5	5268
No ice, no wind	100	64.6	4291	76.7	4570	89.4	4852	102.6	5119

TABLE II

Initial Sags and Tensions with Cable in Place,
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.40 Pounds per foot with Diameter 2.60 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 2,000 pounds at 60°.

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tensio in Pound
Initial									
No ice, no wind	0	108.4	5764	122.2	6000	136.7	6232	151.3	6460
No ice, no wind	20	109.8	5701	123.7	5940	137.9	6174	152.7	6403
No ice, no wind	40	111.2	5634	125.2	5875	139.5	6112	154.3	6344
No ice, no wind	60	112.4	5568	126.6	5812	140.9	6050	155.8	6283
No ice, no wind	80	113.8	5500	128.0	5745	142.4	5986	157.3	6224
No ice, no wind	100	115.2	5433	129.4	5680	144.0	5924	158.8	6162
Medium-Final									
1/4" ice, no wind	32	121.2	--	136.9	--				
No ice, no wind	60	114.6	5459	129.4	5677				
No ice, no wind	100	117.8	5320	132.9	5539				
Light-Final									
No ice, no wind	60	113.2	5524	127.7	5756	142.5	5984	157.8	6205
No ice, no wind	100	116.5	5380	131.1	5616	146.0	5848	161.3	6072

TABLE II

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.60 Pounds per foot with Diameter 2.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	20.2	3553	28.9	3882	38.5	4197	49.0	4502
No ice, no wind	20	20.8	3456	29.6	3792	39.4	4118	49.9	4427
No ice, no wind	40	21.4	3362	30.3	3705	40.2	4035	50.8	4348
No ice, no wind	60	22.0	3271	31.0	3619	40.9	3953	51.7	4271
No ice, no wind	80	22.6	3181	31.8	3532	41.7	3870	52.6	4194
No ice, no wind	100	23.2	3091	32.5	3448	42.6	3788	53.6	4116
Heavy-Final									
1/2" ice, no wind	32	26.0	--	36.5	--	47.9	--	60.2	--
No ice, no wind	60	22.5	3209	31.6	3550	41.8	3873	52.9	4180
No ice, no wind	100	23.8	3022	33.4	3374	43.6	3706	54.9	4025
Medium-Final									
1/4" ice, no wind	32	23.6	--	33.4	--	44.0	--	55.3	--
No ice, no wind	60	22.4	3237	31.4	3578	41.4	3908	52.4	4222
No ice, no wind	100	23.6	3047	33.1	3400	43.3	3737	54.5	4062
Light-Final									
No ice, no wind	60	22.2	3253	31.1	3596	41.2	3928	52.0	4246
No ice, no wind	100	23.5	3064	32.8	3418	43.0	3757	54.1	4086

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	60.1	4797	71.8	5083	84.1	5363	97.1	5629
No ice, no wind	20	61.1	4725	72.9	5013	85.8	5294	98.3	5567
No ice, no wind	40	62.1	4650	74.0	4942	86.6	5226	99.6	5500
No ice, no wind	60	63.1	4575	75.0	4870	87.8	5159	100.9	5433
No ice, no wind	80	64.2	4498	76.1	4796	89.0	5088	102.2	5367
No ice, no wind	100	65.2	4424	77.3	4723	90.2	5017	103.5	5299
Heavy-Final									
1/2" ice, no wind	32	73.2	--	87.2	--	102.7	--		
No ice, no wind	60	64.6	4470	77.3	4739	90.8	4991		
No ice, no wind	100	67.0	4321	79.7	4596	93.4	4849		
Medium-Final									
1/4" ice, no wind	32	67.4	--	80.3	--	94.0	--	108.3	--
No ice, no wind	60	63.9	4523	76.1	4811	89.1	5084	102.7	5348
No ice, no wind	100	66.1	4368	78.6	4655	91.8	4933	105.6	5194
Light-Final									
No ice, no wind	60	63.4	4548	75.5	4840	88.3	5124	101.5	5394
No ice, no wind	100	65.8	4394	78.1	4681	91.1	4974	104.5	5246

TABLE II

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.60 Pounds per foot with Diameter 2.70 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial							
No ice, no wind	0	110.7	5893	125.0	6133	139.8	6369
No ice, no wind	20	112.0	5832	126.4	6074	141.0	6312
No ice, no wind	40	113.4	5766	127.8	6010	142.5	6251
No ice, no wind	60	114.6	5701	129.2	5948	143.9	6191
No ice, no wind	80	116.0	5634	130.6	5882	145.4	6129
No ice, no wind	100	117.3	5568	132.0	5819	146.9	6068
Medium-Final							
1/4" ice, no wind	32	123.5	--				
No ice, no wind	60	117.0	5582				
No ice, no wind	100	120.1	5444				
Light-Final							
No ice, no wind	60	115.5	5654	130.5	5888	145.7	6119
No ice, no wind	100	118.7	5511	133.8	5749	149.1	5985

TABLE II

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.80 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	20.8	3609	29.6	3950	3950	39.4	50.2	4592
No ice, no wind	20	22.4	3514	30.3	3861	40.3	4198	51.0	4518
No ice, no wind	40	22.0	3421	31.0	3775	41.1	4116	51.9	4439
No ice, no wind	60	22.6	3331	31.7	31.7	3687	41.8	52.8	4364
No ice, no wind	80	23.2	3242	32.5	3603	42.6	3952	53.7	4287
No ice, no wind	100	23.8	3152	33.2	3519	43.5	3870	54.7	4210
Heavy-Final									
1/2" ice, no wind	32	26.5	—	37.3	—	48.8	—	61.3	—
No ice, no wind	60	23.1	3269	32.3	3621	42.7	3954	54.0	4271
No ice, no wind	100	24.4	3084	34.1	3447	44.5	3790	55.9	4119
Medium-Final									
1/4" ice, no wind	32	24.1	—	34.2	—	44.9	—	56.4	—
No ice, no wind	60	23.0	3297	32.1	3648	42.3	3990	53.5	4314
No ice, no wind	100	24.2	3109	33.8	3471	44.2	3819	55.6	4156
Light-Final									
No ice, no wind	60	22.8	3314	31.9	3667	42.1	4011	53.1	4338
No ice, no wind	100	24.0	3125	33.5	3489	43.9	3840	55.2	4181

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	61.4	4897	73.3	5193	85.9	5481	99.1	5753
No ice, no wind	20	62.4	4825	74.4	5123	87.1	5413	100.3	5692
No ice, no wind	40	63.4	4750	75.5	5052	88.3	5345	101.6	5626
No ice, no wind	60	64.3	4676	76.5	4981	89.5	5279	102.8	5560
No ice, no wind	80	65.4	4600	77.6	4908	90.7	5209	104.1	5496
No ice, no wind	100	66.4	4526	78.7	4836	91.9	5140	105.4	5429
Heavy-Final									
1/2" ice, no wind	32	74.4	—	88.6	—	104.4	—		
No ice, no wind	60	66.0	4568	78.9	4843	92.7	5100		
No ice, no wind	100	68.3	4421	81.3	4702	95.3	4960		
Medium-Final									
1/4" ice, no wind	32	68.7	—	81.8	—	95.7	—	110.2	—
No ice, no wind	60	65.2	4624	77.6	4920	90.8	5200	104.7	5470
No ice, no wind	100	67.4	4470	80.1	4768	93.5	5053	107.6	5317
Light-Final									
No ice, no wind	60	64.7	4649	77.0	4951	90.1	5244	103.5	5520
No ice, no wind	100	67.0	4497	79.5	4793	92.8	5096	106.4	5373

TABLE II

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
5.00 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	21.4	3665	30.4	4019	40.4	4357	51.4	4683
No ice, no wind	20	22.0	3572	31.0	3930	41.2	4279	52.2	4609
No ice, no wind	40	22.6	3480	31.7	3845	42.0	4197	53.0	4531
No ice, no wind	60	23.2	3391	32.5	3760	42.7	4118	53.9	4457
No ice, no wind	80	23.8	3303	33.2	3674	43.5	4034	54.8	4380
No ice, no wind	100	24.4	3214	33.9	3590	44.4	3952	55.8	4304
Heavy-Final									
1/2" ice, no wind	32	27.0	--	38-1	--	49.8	--	62.4	--
No ice, no wind	60	23.7	3329	33.1	3692	43.6	4035	55.1	4363
No ice, no wind	100	25.0	3146	34.8	3520	45.4	3875	57.0	4213
Medium-Final									
1/4" ice, no wind	32	24.6	--	35.0	--	45.9	--	57.5	--
No ice, no wind	60	23.6	3358	32.9	3718	43.2	4072	54.6	4406
No ice, no wind	100	24.8	3171	34.5	3542	45.1	3901	56.7	4250
Light-Final									
No ice, no wind	60	23.4	3375	32.7	3738	43.0	4094	54.2	4430
No ice, no wind	100	24.6	3187	34.2	3560	44.8	3923	56.3	42.76

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	62.7	4997	74.9	5303	87.7	5599	101.1	5877
No ice, no wind	20	63.7	4925	75.9	5233	88.9	5532	102.3	5817
No ice, no wind	40	64.7	4850	77.0	5163	90.0	5465	103.6	5752
No ice, no wind	60	65.6	4777	78.0	5092	91.2	5399	104.8	5687
No ice, no wind	80	66.6	4702	79.1	5020	92.4	5331	106.0	5625
No ice, no wind	100	67.6	4628	80.2	4949	93.6	5263	107.3	5559
Heavy-Final									
1/2" ice, no wind	32	75.6	--	90.0	--	106.1	--		
No ice, no wind	60	67.4	4666	80.6	4948	94.6	5209		
No ice, no wind	100	69.6	4521	82.9	4808	97.2	5071		
Medium-Final									
1/4" ice, no wind	32	70.0	--	83.3	--	97.4	--	112.1	--
No ice, no wind	60	66.5	4725	79.1	5029	92.6	5316	106.7	5591
No ice, no wind	100	68.7	4572	81.6	4881	95.2	5173	109.6	5441
Light-Final									
No ice, no wind	60	66.0	4750	78.5	5062	91.9	5364	105.5	5646
No ice, no wind	100	68.3	4600	81.0	4905	94.5	5218	108.3	5500

TABLE II

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
5/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
5.00 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial					
No ice, no wind	0	115.3	6153	130.6	6399
No ice, no wind	20	116.5	6094	131.8	6342
No ice, no wind	40	117.8	6030	133.1	6280
No ice, no wind	60	119.0	5967	134.4	6220
No ice, no wind	80	120.4	5902	135.9	6158
No ice, no wind	100	121.7	5838	137.2	6097
Light-Final					
No ice, no wind	60	120.1	5915	136.1	6153
No ice, no wind	100	123.1	5773	139.2	6016

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	17.0	4973	19.8	5051	23.6	5129	28.2	5207
No ice, no wind	20	17.8	4728	20.9	4813	24.9	4898	29.7	4984
No ice, no wind	40	18.7	4479	22.0	4570	26.3	4660	31.3	4750
No ice, no wind	60	19.8	4231	23.3	4331	27.8	4431	33.1	4529
No ice, no wind	80	21.0	3985	24.8	4093	29.5	4200	34.9	4305
No ice, no wind	100	22.4	3751	26.4	3865	31.3	3979	36.9	4091
Heavy-Final									
1/2" ice, no wind	32	30.8	--	36.3	--	42.9	--	50.3	--
No ice, no wind	60	20.9	4040	24.6	4131	29.3	4221	34.8	4311
No ice, no wind	100	23.9	3525	28.2	3635	33.5	3745	39.3	3853
Medium-Final									
1/4" ice, no wind	32	24.4	--	28.9	--	34.4	--	40.6	--
No ice, no wind	60	20.5	4103	24.1	4197	28.6	4290	34.0	4383
No ice, no wind	100	23.4	3583	27.5	3697	32.5	3810	38.3	3921
Light-Final									
No ice, no wind	60	20.3	4127	23.8	4223	28.2	4318	33.5	4413
No ice, no wind	100	23.2	3609	27.1	3723	32.2	3837	37.8	3950

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
Initial									
No ice, no wind	0	33.5	5286	39.2	5365	45.5	5443	52.3	5521
No ice, no wind	20	35.2	5069	41.1	5154	47.6	5238	54.5	5322
No ice, no wind	40	36.9	4840	43.0	4930	49.7	5019	56.8	5108
No ice, no wind	60	38.9	4627	45.2	4724	52.1	4820	59.2	4915
No ice, no wind	80	40.9	4410	47.3	4513	54.4	4614	61.7	4714
No ice, no wind	100	43.0	4201	49.7	4310	56.9	4417	64.4	4523
Heavy-Final									
1/2" ice, no wind	32	58.3	--	67.0	--	76.2	--	85.7	--
No ice, no wind	60	40.9	4400	47.5	4490	54.7	4579	62.2	4668
No ice, no wind	100	45.8	3960	52.8	4065	60.3	4169	68.3	4271
Medium-Final									
1/4" ice, no wind	32	47.5	--	54.9	--	62.9	--	71.2	--
No ice, no wind	60	39.9	4476	46.4	4569	53.4	4660	60.9	4752
No ice, no wind	100	44.7	4031	51.5	4139	59.0	4246	66.8	4351
Light-Final									
No ice, no wind	60	39.4	4507	45.8	4600	52.7	4694	60.1	4787
No ice, no wind	100	44.2	4060	51.1	4170	58.4	4277	66.1	4383

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	59.3	5600	66.6	5679	74.0	5757	81.4	5836
No ice, no wind	20	61.6	5406	69.0	5490	76.5	5573	84.1	5656
No ice, no wind	40	64.0	5196	71.6	5284	79.2	5372	87.0	5460
No ice, no wind	60	66.7	5010	74.4	5104	82.2	5197	90.1	5290
No ice, no wind	80	69.4	4813	77.1	4910	85.0	5007	93.2	5104
No ice, no wind	100	72.2	4627	80.0	4729	88.1	4831	96.3	4931
Heavy-Final									
1/2" ice, no wind	32	95.7	--	105.8	--	116.0	--	126.5	--
No ice, no wind	60	70.1	4757	78.1	4845	86.3	4938	94.6	5021
No ice, no wind	100	76.6	4372	84.8	4470	93.3	4569	101.9	4666
Medium-Final									
1/4" ice, no wind	32	79.8	--	88.5	--	97.5	--	106.6	--
No ice, no wind	60	68.6	4843	76.5	4935	84.6	5026	92.9	5116
No ice, no wind	100	74.8	4455	83.0	4557	91.4	4657	99.9	4757
Light-Final									
No ice, no wind	60	67.8	4879	75.7	4971	83.7	5063	92.0	5156
No ice, no wind	100	74.2	4488	82.3	4590	90.6	4691	99.1	4790

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
Initial									
No ice, no wind	0	89.2	5915	97.0	5993	105.0	6072	113.4	6151
No ice, no wind	20	91.9	5739	99.9	5823	108.2	5907	116.7	5990
No ice, no wind	40	95.0	5548	103.0	5635	111.4	5723	120.1	5810
No ice, no wind	60	98.2	5378	106.5	5470	115.1	5561	123.9	5650
No ice, no wind	80	101.4	5199	109.8	5295	118.6	5388	127.6	5481
No ice, no wind	100	104.8	5031	113.3	5128	122.1	5225	131.3	5320
Heavy-Final									
1/2" ice, no wind	32	137.2	--	148.0	--	159.4	--	170.9	--
No ice, no wind	60	103.2	5109	111.9	5197	121.1	5285	130.3	5372
No ice, no wind	100	110.8	4762	119.8	4856	129.0	4949	138.5	5042
			--	125.5	--	135.1	--	145.1	--
			5207	109.8	5297	118.6	5388	127.7	5475
			4855	117.4	4952	126.5	5049	135.8	5145
			5248	108.9	5339	117.7	5429	126.7	5517
			4889	116.5	4986	125.5	5082	134.9	5177

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	121.9	6229	130.8	6307	139.8	6385	149.0	6463
No ice, no wind	20	125.5	6073	134.4	6155	143.6	6236	152.9	6316
No ice, no wind	40	129.1	5897	138.1	5983	147.5	6068	157.0	6153
No ice, no wind	60	133.0	5738	142.2	5826	151.7	5913	161.3	5998
No ice, no wind	80	136.8	5574	146.2	5665	155.8	5755	165.5	5843
No ice, no wind	100	140.7	5413	150.1	5505	159.8	5597	169.7	5688
Heavy-Final									
1/2" ice, no wind	32	182.7	--	194.7	--	207.0	--	219.4	--
No ice, no wind	60	139.8	5457	149.7	5540	159.7	5622	170.0	5703
No ice, no wind	100	148.3	5134	158.4	5224	168.6	5313	1179.0	5401
Medium-Final									
1/4" ice, no wind	32	155.3	--	165.7	--	176.5	--	187.3	--
No ice, no wind	60	137.1	5563	146.8	5648	156.6	5732	166.6	5816
No ice, no wind	100	145.5	5238	155.3	5330	165.4	5420	175.5	5510
Light-Final									
No ice, no wind	60	136.1	5605	145.7	5691	155.5	5776	165.4	5858
No ice, no wind	100	144.5	5270	154.3	5363	164.2	5453	174.4	5543
Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
Initial									
No ice, no wind	0	158.4	6541	168.0	6618	177.6	6695	187.3	6772
No ice, no wind	20	162.5	6395	172.1	6474	181.8	6552	191.7	6628
No ice, no wind	40	166.6	6235	176.4	6317	186.1	6399	196.2	6480
No ice, no wind	60	171.1	6083	181.0	6167	190.9	6250	200.9	6333
No ice, no wind	80	175.4	5931	185.4	6018	195.5	6105	205.7	6190
No ice, no wind	100	179.6	5778	189.7	5867	199.9	5955	210.2	6043
Heavy-Final									
1/2" ice, no wind	32	231.8	--	244.3	--	257.0	--	269.9	--
No ice, no wind	60	180.4	5782	191.0	5860	201.6	5936	212.2	6011
No ice, no wind	100	189.7	5487	200.4	5573	211.2	5657	222.3	5737
Medium-Final									
1/4" ice, no wind	32	198.5	--	209.7	--	221.0	--	232.5	--
No ice, no wind	60	176.8	5897	186.9	5977	197.3	6057	207.8	6136
No ice, no wind	100	185.9	5597	196.3	5684	206.9	5769	217.6	5853
Light-Final									
No ice, no wind	60	175.5	5940	185.7	6020	196.0	6099	206.5	6178
No ice, no wind	100	184.6	5630	194.9	5716	205.4	5801	216.0	5886

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	197.4	6849	207.7	6923	217.7	6997	228.3	7069
No ice, no wind	20	201.6	6704	211.8	6779	222.4	6854	233.2	6928
No ice, no wind	40	206.4	6560	216.7	6638	227.3	6715	238.1	6790
No ice, no wind	60	211.2	6415	221.5	6495	232.2	6573	243.2	6651
No ice, no wind	80	216.0	6274	226.5	6355	237.4	6435	248.5	6514
No ice, no wind	100	220.8	6129	231.4	6212	242.4	6295	253.6	6375
Heavy-Final									
1/2" ice, no wind	32	283.2	--	296.7	--	310.6	--	324.9	--
No ice, no wind	60	223.2	6086	234.4	6157	245.9	6226	257.8	6293
No ice, no wind	100	233.4	5817	245.0	5893	256.9	5969	269.0	6042
Medium-Final									
1/4" ice, no wind	32	244.2	--	256.2	--	268.5	--	281.1	--
No ice, no wind	60	218.4	6213	229.2	6289	240.3	6365	251.8	6439
No ice, no wind	100	228.6	5936	239.7	6016	251.2	6096	262.9	6175
Light-Final									
No ice, no wind	60	217.2	6256	227.9	6332	238.8	6408	250.1	6482
No ice, no wind	100	226.8	5970	237.8	6052	249.2	6133	260.7	6212

Span Length		900-ft.		925-ft.		950-ft.		975-ft.	
Initial									
No ice, no wind	0	239.3	7141	250.4	7211	261.8	7281	273.3	7349
No ice, no wind	20	244.2	7001	255.5	7074	267.0	7145	278.6	7214
No ice, no wind	40	249.4	6864	260.8	6937	272.5	7009	284.4	7079
No ice, no wind	60	254.5	6727	265.9	6801	277.6	6875	289.6	6947
No ice, no wind	80	260.0	6591	271.6	6667	283.5	6742	295.5	6816
No ice, no wind	100	265.3	6454	277.1	6532	289.1	6609	301.3	6685
Heavy-Final									
1/2" ice, no wind	32	339.5	--	354.3	--	369.3	--	384.3	--
No ice, no wind	60	270.0	6357	282.4	6419	295.0	6477	307.9	6536
No ice, no wind	100	281.7	6113	294.5	6179	307.5	6240	320.7	6295
				307.0	--	320.4	--	333.8	--
				275.3	6586	287.4	6658	299.6	6731
				287.0	6327	299.4	6401	311.9	6471
				273.4	6629	285.4	6701	2297.4	6773
				284.6	6367	296.8	6440	309.1	6513

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.00 Pounds per foot with Diameter 1.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length	Temp. °F	1000-ft. Sag in Inches	1000-ft. Tension in Pounds
Initial			
No ice, no wind	0	285.0	7415
No ice, no wind	20	290.4	7282
No ice, no wind	40	296.4	7149
No ice, no wind	60	301.8	7019
No ice, no wind	80	307.8	6889
No ice, no wind	100	313.8	6762
Heavy-Final			
1/2" ice, no wind	32	399.6	--
No ice, no wind	60	321.0	6592
No ice, no wind	100	334.2	6346
Medium-Final			
1/4" ice, no wind	32	347.4	--
No ice, no wind	60	312.0	6800
No ice, no wind	100	324.6	6540
Light-Final			
No ice, no wind	60	309.6	6843
No ice, no wind	100	321.6	6583

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.50 Pounds per foot with Diameter 1.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	21.8	5202	26.5	5330	32.1	5456	38.1	5579
No ice, no wind	20	22.9	4973	27.8	5101	33.5	5230	39.7	5357
No ice, no wind	40	24.1	4745	29.2	4878	35.1	5010	41.5	5142
No ice, no wind	60	25.3	4525	30.7	4662	36.7	4799	43.2	4936
No ice, no wind	80	26.6	4309	32.2	4450	38.4	4592	45.1	4731
No ice, no wind	100	28.0	4104	33.7	4246	40.1	4392	47.0	4537
Heavy-Final									
1/2" ice, no wind	32	35.6	--	42.0	--	49.4	--	57.7	--
No ice, no wind	60	26.5	4340	31.9	4474	38.2	4605	45.0	4735
No ice, no wind	100	29.5	3887	35.2	4036	41.7	4184	48.9	6042
Medium-Final									
1/4" ice, no wind	32	29.6	--	35.5	--	42.1	--	49.5	--
No ice, no wind	60	26.0	4407	31.3	4545	37.4	4679	44.0	4811
No ice, no wind	100	29.2	3945	34.8	4097	41.2	4247	48.1	4395
Light-Final									
No ice, no wind	60	25.9	4439	31.0	4577	37.0	4711	43.5	4845
No ice, no wind	100	29.0	3976	34.6	4127	40.9	4278	47.8	4427

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
Initial									
No ice, no wind	0	44.7	5700	51.8	5821	59.2	5939	67.0	6056
No ice, no wind	20	46.5	5482	53.8	5607	61.4	5733	69.3	5856
No ice, no wind	40	48.4	5273	55.9	5404	63.6	5534	71.6	5664
No ice, no wind	60	50.4	5072	57.9	5206	65.7	5342	73.8	5477
No ice, no wind	80	52.4	4872	60.0	5012	68.0	5153	76.2	5293
No ice, no wind	100	54.5	4682	62.3	4828	70.4	4972	78.7	5115
Heavy-Final									
1/2" ice, no wind	32	66.6	--	76.2	--	86.2	--	96.7	--
No ice, no wind	60	52.4	4866	60.2	4994	68.4	5122	76.9	5250
No ice, no wind	100	56.5	4474	64.7	4616	73.3	4757	82.2	4898
Medium-Final									
1/4" ice, no wind	32	57.4	--	65.9	--	74.8	--	84.0	--
No ice, no wind	60	51.2	4944	58.9	5075	66.9	5205	75.3	5337
No ice, no wind	100	55.6	4544	63.7	4691	72.0	4835	80.7	4976
Light-Final									
No ice, no wind	60	50.7	4977	58.3	5110	66.4	5242	74.7	5374
No ice, no wind	100	55.2	4576	63.3	4722	71.5	4866	80.1	5008

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.50 Pounds per foot with Diameter 1.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	74.9	6174	82.9	6290	91.2	6405	99.6	6520
No ice, no wind	20	77.3	5979	85.4	6101	93.7	6224	102.2	6347
No ice, no wind	40	79.7	5794	87.9	5922	96.4	6050	104.9	6147
No ice, no wind	60	82.0	5612	90.4	5746	99.0	5879	107.6	6012
No ice, no wind	80	84.6	5432	93.1	5569	101.7	5707	110.5	5845
No ice, no wind	100	87.2	5258	95.8	5403	104.7	5543	113.6	5683
Heavy-Final									
1/2" ice, no wind	32	107.6	--	118.6	--	129.7	--	141.1	--
No ice, no wind	60	85.5	5378	94.3	5504	103.3	5630	112.4	5756
No ice, no wind	100	91.2	5036	100.3	5172	109.7	5305	119.1	5435
Medium-Final									
1/4" ice, no wind	32	93.5	--	103.0	--	112.8	--	122.7	--
No ice, no wind	60	83.8	5468	92.5	5597	101.3	5725	110.4	5854
No ice, no wind	100	89.5	5117	98.4	5257	107.6	5394	116.8	5528
Light-Final									
No ice, no wind	60	83.3	5504	92.0	5634	100.8	5761	109.8	5892
No ice, no wind	100	88.9	5249	97.8	5289	106.9	5427	116.2	5561
Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
Initial									
No ice, no wind	0	108.0	6635	116.7	6746	125.8	6858	135.0	6970
No ice, no wind	20	110.8	6470	119.6	6584	128.8	6697	138.2	6812
No ice, no wind	40	113.6	6305	122.7	6420	131.9	6536	141.4	6652
No ice, no wind	60	116.5	6144	125.6	6262	135.0	6381	144.6	6498
No ice, no wind	80	119.5	5982	128.8	6101	138.2	6222	148.0	6342
No ice, no wind	100	122.6	5826	132.0	5946	141.6	6069	151.5	6193
Heavy-Final									
1/2" ice, no wind	32	152.6	--	164.1	--	175.9	--	188.0	--
No ice, no wind	60	121.6	5881	131.3	5999	141.3	6116	151.5	6234
No ice, no wind	100	128.8	5560	138.7	5688	149.0	5814	159.5	5937
Medium-Final									
1/4" ice, no wind	32	132.8	--	143.0	--	153.6	--	164.3	--
No ice, no wind	60	119.5	5982	128.7	6096	138.5	6212	148.5	6330
No ice, no wind	100	126.4	5658	135.7	5785	145.7	5911	155.9	6036
Light-Final									
No ice, no wind	60	118.9	6022	128.1	6144	137.8	6265	147.7	6386
No ice, no wind	100	125.6	5693	135.1	5821	145.0	5946	155.1	6072

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.50 Pounds per foot with Diameter 1.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	144.5	7080	154.3	7191	164.5	7300	175.0	7409
No ice, no wind	20	147.8	6925	157.7	7038	168.1	7151	178.7	7262
No ice, no wind	40	151.2	6768	161.3	6885	171.7	7000	182.5	7114
No ice, no wind	60	154.4	6615	164.7	6732	175.3	6848	186.2	6964
No ice, no wind	80	158.0	6462	168.5	6582	179.3	6700	190.3	6821
No ice, no wind	100	161.7	6313	172.3	6435	183.2	6556	194.4	6677
Heavy-Final									
1/2" ice, no wind	32	200.5	--	213.4	--	226.7	--	240.4	--
No ice, no wind	60	161.9	6348	172.8	6459	184.0	6569	195.6	6677
No ice, no wind	100	170.2	6056	181.3	6172	192.9	6288	204.7	6400
Medium-Final									
1/4" ice, no wind	32	175.4	--	186.7	--	198.6	--	210.8	--
No ice, no wind	60	158.9	6446	169.6	6562	180.6	6677	191.8	6792
No ice, no wind	100	166.3	6160	177.0	6281	188.2	6400	199.6	6518
Light-Final									
No ice, no wind	60	158.0	6504	168.6	6622	179.5	6739	190.6	6851
No ice, no wind	100	165.4	6195	176.1	6318	187.2	6439	198.7	6555

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
Initial									
No ice, no wind	0	185.8	7517	196.8	7626	208.0	7733	219.5	7841
No ice, no wind	20	189.7	7374	200.7	7485	212.1	7595	223.6	7704
No ice, no wind	40	193.5	7227	204.7	7341	216.1	7451	227.7	7564
No ice, no wind	60	197.3	7079	208.6	7194	220.1	7308	231.8	7422
No ice, no wind	80	201.5	6938	213.1	7055	224.7	7172	236.4	7288
No ice, no wind	100	205.7	6797	217.4	6916	229.2	7033	241.1	7152
Heavy-Final									
1/2" ice, no wind	32	254.5	--	268.7	--	283.1	--	297.7	--
No ice, no wind	60	207.4	6781	219.4	6882	231.7	6981	1244.1	7076
No ice, no wind	100	216.9	6505	229.3	6611	241.9	6712	154.7	6811
Medium-Final									
1/4" ice, no wind	32	223.3	--	236.0	--	248.9	--	262.0	--
No ice, no wind	60	203.2	6905	214.8	7019	226.5	7132	238.3	7243
No ice, no wind	100	211.4	6634	223.3	6747	235.5	6857	247.8	6967
Light-Final									
No ice, no wind	60	201.9	6962	213.5	7074	225.1	7184	236.9	7288
No ice, no wind	100	210.3	6672	222.3	6787	234.4	6900	246.8	7010

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.50 Pounds per foot with Diameter 1.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	231.0	7947	242.7	8053	254.6	8159	266.7	8261
No ice, no wind	20	235.2	7814	246.9	7922	258.9	8029	271.1	8132
No ice, no wind	40	239.4	7675	251.3	7785	263.4	7894	275.8	8000
No ice, no wind	60	243.6	7536	255.6	7645	267.9	7753	280.5	7860
No ice, no wind	80	248.4	7406	260.5	7515	272.9	7625	285.5	7732
No ice, no wind	100	253.2	7271	265.4	7383	277.8	7493	290.5	7600
Heavy-Final									
1/2" ice, no wind	32	312.6	--	328.0	--	343.7	--	359.9	--
No ice, no wind	60	256.8	7169	269.9	7258	283.8	7345	298.2	7427
No ice, no wind	100	267.6	6907	281.0	6999	295.0	7089	309.4	7174
Medium-Final									
1/4" ice, no wind	32	275.4	--	288.4	--	301.9	--	315.6	--
No ice, no wind	60	250.2	7352	262.7	7457	275.3	7557	288.0	7656
No ice, no wind	100	260.4	7074	273.1	7180	286.1	7285	299.1	7388
Light-Final									
No ice, no wind	60	249.0	7395	261.1	7496	273.4	7597	285.8	7698
No ice, no wind	100	259.2	7120	271.6	7226	284.3	7331	297.0	7436

Span Length		900-ft.		925-ft.		950-ft.		975-ft.	
Initial									
No ice, no wind	0	279.2	8359	291.7	8453	304.2	8545	317.0	8632
No ice, no wind	20	283.6	8232	296.0	8330	308.6	8422	321.3	8509
No ice, no wind	40	288.3	8103	300.8	8204	313.6	8299	326.5	8390
No ice, no wind	60	293.1	7964	305.8	8062	318.7	8161	331.7	8255
No ice, no wind	80	298.1	7835	311.0	7936	324.0	8032	337.0	8127
No ice, no wind	100	303.2	7706	316.1	7807	329.2	7907	342.3	8003
Heavy-Final									
1/2" ice, no wind	32	376.3	--	393.1	--				
No ice, no wind	60	312.8	7504	327.7	7571				
No ice, no wind	100	323.8	7256	338.6	7330				
Medium-Final									
1/4" ice, no wind	32	329.5	--	344.0	--	358.5	--	373.2	--
No ice, no wind	60	300.8	7751	314.0	7842	327.6	7931	341.3	8015
No ice, no wind	100	312.3	7487	325.6	7584	339.1	7678	352.7	7768
Light-Final									
No ice, no wind	60	298.5	7796	311.7	7891	325.0	7985	338.5	8075
No ice, no wind	100	309.8	7536	322.8	7636	336.0	7732	349.4	7826

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
1.50 Pounds per foot with Diameter 1.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length	Temp. °F	1000-ft. Sag in Inches	1000-ft. Tension in Pounds
Initial			
No ice, no wind	0	330.0	8715
No ice, no wind	20	334.2	8594
No ice, no wind	40	339.6	8476
No ice, no wind	60	345.0	8343
No ice, no wind	80	350.4	8218
No ice, no wind	100	355.8	8097
Medium-Final			
1/4" ice, no wind	32	388.2	--
No ice, no wind	60	355.2	8097
No ice, no wind	100	366.6	7857
Light-Final			
No ice, no wind	60	352.2	8164
No ice, no wind	100	363.0	7918

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	26.3	5473	31.5	5627	37.7	5783	44.6	5940
No ice, no wind	20	27.5	5259	33.0	5422	39.3	5584	46.3	5745
No ice, no wind	40	28.7	5051	34.4	5218	40.9	5386	48.0	5552
No ice, no wind	60	29.9	4846	35.7	5026	42.4	5202	49.7	5378
No ice, no wind	80	31.3	4638	37.3	4820	44.1	5002	51.5	5184
No ice, no wind	100	32.8	4433	38.9	4623	45.8	4812	53.4	4998
Heavy-Final									
1/2" ice, no wind	32	40.0	--	47.3	--	55.6	--	64.7	--
No ice, no wind	60	30.8	4679	36.9	4860	43.9	5030	51.6	5198
No ice, no wind	100	34.0	4242	40.5	4428	47.9	4611	55.9	4791
Medium-Final									
1/4" ice, no wind	32	34.0	--	40.8	--	48.5	--	56.7	--
No ice, no wind	60	30.6	4739	36.5	4916	43.3	5087	50.9	5257
No ice, no wind	100	33.6	4294	40.1	4485	47.3	4675	55.2	4864
Light-Final									
No ice, no wind	60	30.4	4762	36.3	4939	43.0	5112	50.4	5285
No ice, no wind	100	33.4	4320	39.7	4511	46.9	4703	54.7	4890
Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
Initial									
No ice, no wind	0	52.1	6094	60.0	6251	68.5	6404	77.2	6559
No ice, no wind	20	53.8	5906	61.9	6066	70.4	6227	79.3	6386
No ice, no wind	40	55.6	5720	64.0	5886	72.6	6051	81.5	6215
No ice, no wind	60	57.5	5550	65.9	5722	74.7	5892	83.8	6060
No ice, no wind	80	59.5	5363	68.0	5540	76.9	5715	86.1	5889
No ice, no wind	100	61.5	5182	70.2	5365	79.2	5545	88.5	5725
Heavy-Final									
1/2" ice, no wind	32	74.4	--	84.8	--	95.7	--	107.0	--
No ice, no wind	60	59.7	5363	68.6	5527	77.7	5690	87.2	5850
No ice, no wind	100	64.3	4969	73.5	5145	82.9	5320	92.6	5492
Medium-Final									
1/4" ice, no wind	32	65.6	--	75.0	--	84.6	--	94.7	--
No ice, no wind	60	58.9	5426	67.5	5591	76.5	5757	85.9	5920
No ice, no wind	100	63.6	5047	72.5	5231	81.7	5411	91.3	5585
Light-Final									
No ice, no wind	60	58.4	5455	67.0	5624	76.0	5791	85.3	5955
No ice, no wind	100	63.0	5077	71.9	5260	81.0	5440	90.6	5616

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	86.2	6712	95.3	6866	104.6	7019	114.1	7170
No ice, no wind	20	88.3	6544	97.5	6702	106.9	6860	116.5	7016
No ice, no wind	40	90.6	6379	99.9	6542	109.5	6704	119.2	6864
No ice, no wind	60	93.1	6225	102.5	6390	112.2	6552	122.0	6712
No ice, no wind	80	95.5	6060	105.1	6230	114.9	6397	124.9	6562
No ice, no wind	100	98.0	5900	107.7	6075	117.7	6245	127.7	6413
Heavy-Final									
1/2" ice, no wind	32	118.5	—	130.2	—	142.0	—	154.2	—
No ice, no wind	60	96.9	6008	106.7	6162	116.7	6316	126.9	6465
No ice, no wind	100	102.3	5662	112.2	5830	122.6	5992	133.0	6152
Medium-Final									
1/4" ice, no wind	32	104.9	—	115.2	—	125.8	—	136.5	—
No ice, no wind	60	95.4	6080	105.1	6240	114.9	6397	125.0	6551
No ice, no wind	100	101.0	5755	110.9	5925	121.0	6091	131.2	6252
Light-Final									
No ice, no wind	60	94.7	6120	104.3	6281	114.2	6441	124.2	6600
No ice, no wind	100	100.2	5790	110.0	5958	120.1	6126	130.2	6290

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
Initial									
No ice, no wind	0	123.7	7320	133.8	7469	144.2	7615	154.9	7760
No ice, no wind	20	126.2	7172	136.4	7324	146.8	7473	157.6	7620
No ice, no wind	40	129.0	7022	139.3	7176	149.7	7326	160.6	7473
No ice, no wind	60	131.9	6872	142.3	7027	152.9	7179	163.8	7329
No ice, no wind	80	134.9	6722	145.5	6881	156.2	7036	167.3	7190
No ice, no wind	100	137.9	6577	148.4	6737	159.4	6894	170.6	7047
Heavy-Final									
1/2" ice, no wind	32	166.4	—	179.0	—	192.0	—	205.3	—
No ice, no wind	60	137.3	6612	147.9	6751	159.0	6890	170.3	7025
No ice, no wind	100	143.5	6311	154.6	6456	165.8	6600	177.4	6741
Medium-Final									
1/4" ice, no wind	32	147.5	—	158.9	—	170.7	—	182.9	—
No ice, no wind	60	135.1	6707	145.4	6856	156.0	7004	166.8	7150
No ice, no wind	100	141.6	6412	152.2	6563	163.1	6713	174.2	6861
Light-Final									
No ice, no wind	60	134.4	6756	144.6	6907	155.0	7056	165.7	7201
No ice, no wind	100	140.6	6450	150.9	6603	161.7	6755	172.8	6904

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	165.8	7902	176.8	8042	188.1	8179	199.5	8310
No ice, no wind	20	168.6	7762	179.7	7903	191.1	8040	202.6	8172
No ice, no wind	40	171.6	7616	182.7	7757	194.1	7896	205.6	8034
No ice, no wind	60	174.8	7474	186.0	7617	197.5	7757	209.1	7896
No ice, no wind	80	178.4	7336	189.8	7481	201.4	7625	213.1	7765
No ice, no wind	100	181.9	7197	193.5	7344	205.2	7488	217.1	7629
Heavy-Final									
1/2" ice, no wind	32	218.9	--	233.0	--	247.5	--	262.4	--
No ice, no wind	60	181.9	7157	193.8	7287	206.2	7413	219.0	7536
No ice, no wind	100	189.3	6879	201.5	7012	214.2	7143	227.3	7271
Medium-Final									
1/4" ice, no wind	32	195.3	--	207.8	--	220.5	--	233.5	--
No ice, no wind	60	178.0	7295	189.7	7438	201.6	7576	213.8	7715
No ice, no wind	100	185.8	7006	197.7	7150	210.0	7293	222.5	7433
Light-Final									
No ice, no wind	60	177.0	7345	188.5	7487	200.4	7627	212.6	7763
No ice, no wind	100	184.3	7051	196.2	7198	208.3	7342	220.7	7483

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
Initial									
No ice, no wind	0	211.2	8441	222.9	8568	235.0	8694	247.3	8820
No ice, no wind	20	214.2	8302	226.1	8432	238.4	8561	250.9	8687
No ice, no wind	40	217.2	8169	229.2	8298	241.6	8427	254.3	8555
No ice, no wind	60	220.8	8034	233.1	8166	245.6	8296	258.3	8426
No ice, no wind	80	225.0	7903	237.4	8035	250.0	8167	262.8	8298
No ice, no wind	100	229.2	7768	241.5	7901	254.2	8033	267.1	8165
Heavy-Final									
1/2" ice, no wind	32	277.8	--	293.4	--	309.7	--	326.4	--
No ice, no wind	60	232.2	7658	245.7	7762	260.1	7867	275.1	7970
No ice, no wind	100	240.6	7398	254.3	7510	268.9	7618	284.0	7725
Medium-Final									
1/4" ice, no wind	32	246.6	--	260.1	--	274.0	--	288.3	--
No ice, no wind	60	226.2	7851	238.8	7980	251.9	8106	265.3	8230
No ice, no wind	100	235.2	7571	248.0	7705	261.2	7835	274.7	7963
Light-Final									
No ice, no wind	60	225.0	7898	237.6	8033	250.5	8167	263.7	8298
No ice, no wind	100	233.4	7623	246.2	7758	259.4	7892	272.8	8026

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		800-ft.		825-ft.		850-ft.		875-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	259.9	8944	272.8	9068	285.8	9191	298.9	9314
No ice, no wind	20	263.6	8813	276.7	8939	289.8	9063	303.0	9187
No ice, no wind	40	267.1	8682	280.2	8809	293.4	8936	306.7	9060
No ice, no wind	60	271.3	8555	284.5	8684	297.8	8812	311.2	8938
No ice, no wind	80	275.8	8427	289.1	8557	302.4	8685	315.8	8812
No ice, no wind	100	280.2	8296	293.4	8429	306.7	8558	320.3	8687
Heavy-Final									
1/2" ice, no wind	32	302.9	--	317.7	--	332.9	--	348.2	--
No ice, no wind	60	279.0	8350	292.9	8467	307.1	8581	321.6	8692
No ice, no wind	100	288.4	8087	302.6	8208	316.9	8326	331.5	8442
Medium-Final									
1/4" ice, no wind	32	302.9	--	317.7	--	332.9	--	348.2	--
No ice, no wind	60	279.0	8350	292.9	8467	307.1	8581	321.6	8692
No ice, no wind	100	288.4	8087	302.6	8208	316.9	8326	331.5	8442
Light-Final									
No ice, no wind	60	277.2	8427	290.7	8551	304.3	8672	318.2	8790
No ice, no wind	100	286.4	8155	300.1	8285	314.0	8410	328.0	8533
Span Length		900-ft.		925-ft.		950-ft.		975-ft.	
Initial									
No ice, no wind	0	312.1	9435	325.5	9556	339.1	9675	352.8	9794
No ice, no wind	20	316.4	9311	329.9	9432	343.5	9553	357.4	9675
No ice, no wind	40	320.2	9184	333.8	9308	347.6	9430	361.5	9552
No ice, no wind	60	324.8	9063	338.5	9188	352.4	9312	366.4	9436
No ice, no wind	80	329.4	8939	343.2	9066	357.2	9191	371.2	9316
No ice, no wind	100	334.0	8816	347.8	8944	361.8	9071	375.9	9198
Medium-Final									
1/4" ice, no wind	32	363.6	--	379.3	--	395.1	--	411.1	--
No ice, no wind	60	336.2	8800	350.9	8906	365.6	9008	380.7	9107
No ice, no wind	100	346.1	8555	360.8	8663	375.8	8769	390.9	8869
Light-Final									
No ice, no wind	60	332.2	8906	346.3	9019	360.6	9127	374.9	9233
No ice, no wind	100	342.1	8652	356.5	8768	370.9	8882	385.5	8992

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.00 Pounds per foot with Diameter 1.90 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		1000 ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	366.6	9915
No ice, no wind	20	371.4	9796
No ice, no wind	40	375.6	9675
No ice, no wind	60	380.4	9559
No ice, no wind	80	385.2	9441
No ice, no wind	100	390.0	9325
Medium-Final			
1/4" ice, no wind	32	427.2	--
No ice, no wind	60	396.0	9201
No ice, no wind	100	406.2	8970
Light-Final			
No ice, no wind	60	389.4	9334
No ice, no wind	100	400.2	9097

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.50 Pounds per foot with Diameter 2.05 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	8.6	5028	12.6	5220	17.4	5412	23.1	5600
No ice, no wind	20	9.1	4785	13.2	4989	18.2	5190	24.0	5390
No ice, no wind	40	9.6	4537	13.9	4751	19.0	4962	25.1	5172
No ice, no wind	60	10.1	4291	14.5	4513	19.8	4734	26.0	4952
No ice, no wind	80	10.7	4049	15.3	4279	20.7	4508	27.0	4735
No ice, no wind	100	11.4	3814	16.2	4058	21.7	4298	28.3	4536
Heavy-Final									
1/2" ice, no wind	32	13.7	--	19.5	--	26.2	--	33.9	--
No ice, no wind	60	10.4	4150	15.0	4365	20.5	4578	26.8	4790
No ice, no wind	100	12.0	3635	16.9	3869	22.7	4106	29.4	4340
Medium-Final									
1/4" ice, no wind	32	11.4	--	16.3	--	22.3	--	29.1	--
No ice, no wind	60	10.3	4196	14.8	4415	20.1	4632	26.5	4847
No ice, no wind	100	11.8	3670	16.6	3912	22.3	4152	28.8	4390
Light-Final									
No ice, no wind	60	10.2	4222	14.6	4442	19.9	4661	26.1	4878
No ice, no wind	100	11.6	3699	16.3	3941	22.0	4181	28.5	4420

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	29.5	5790	36.5	5977	44.2	6167	52.3	6356
No ice, no wind	20	30.6	5587	37.8	5784	45.5	5979	53.8	6172
No ice, no wind	40	31.8	5378	39.1	5585	47.0	5788	55.4	5990
No ice, no wind	60	32.9	5168	40.3	5383	48.3	5595	56.8	5805
No ice, no wind	80	34.0	4958	41.6	5181	49.8	5401	58.4	5620
No ice, no wind	100	35.4	4772	43.1	5001	51.4	5230	60.2	5453
Heavy-Final									
1/2" ice, no wind	32	42.4	--	51.6	--	61.3	--	71.7	--
No ice, no wind	60	33.9	4998	41.6	5206	49.9	5411	58.7	5614
No ice, no wind	100	36.8	4573	44.8	4801	53.4	5026	62.5	5250
Medium-Final									
1/4" ice, no wind	32	36.8	--	44.8	--	53.6	--	62.9	--
No ice, no wind	60	33.5	5060	41.1	5271	49.3	5481	58.0	5687
No ice, no wind	100	36.1	4626	44.0	4860	52.6	5088	61.6	5315
Light-Final									
No ice, no wind	60	33.1	5092	40.7	5305	48.8	5516	57.5	5726
No ice, no wind	100	35.8	4656	43.7	4891	52.2	5120	61.3	5347

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.50 Pounds per foot with Diameter 2.05 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	60.6	6542	69.2	6730	78.0	6916	87.1	7100
No ice, no wind	20	62.3	6363	71.0	6553	79.9	6743	89.1	6932
No ice, no wind	40	64.0	6190	72.8	6386	81.9	6580	91.2	6773
No ice, no wind	60	65.6	6014	74.5	6213	83.7	6412	93.1	6610
No ice, no wind	80	67.4	5837	76.4	6043	85.8	6247	95.3	6450
No ice, no wind	100	69.2	5673	78.3	5886	87.8	6095	97.4	6300
Heavy-Final									
1/2" ice, no wind	32	82.4	--	93.6	--	105.0	--	116.6	--
No ice, no wind	60	67.8	5817	77.2	6014	86.8	6210	96.8	6403
No ice, no wind	100	71.9	5467	81.6	5676	91.5	5882	101.6	6085
Medium-Final									
1/4" ice, no wind	32	72.5	--	82.6	--	93.1	--	103.7	--
No ice, no wind	60	67.0	5892	76.1	6088	85.7	6283	95.5	6475
No ice, no wind	100	71.0	5537	80.5	5745	90.3	5950	100.3	6153
Light-Final									
No ice, no wind	60	66.5	5933	75.5	6130	85.1	6326	94.9	6521
No ice, no wind	100	70.6	5571	80.0	5780	89.7	5986	99.7	6190

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	96.5	7283	106.1	7465	116.0	7644	126.3	7820
No ice, no wind	20	98.5	7120	108.2	7305	118.3	7487	128.7	7668
No ice, no wind	40	100.6	6963	110.6	7151	120.7	7337	131.3	7521
No ice, no wind	60	102.7	6805	112.7	6997	123.1	7188	133.7	7376
No ice, no wind	80	105.1	6651	115.2	6848	125.6	7042	136.5	7231
No ice, no wind	100	107.3	6505	117.6	6704	128.2	6900	139.1	7092
Heavy-Final									
1/2" ice, no wind	32	128.5	--	140.4	--	152.5	--	164.9	--
No ice, no wind	60	106.9	6592	117.5	6777	128.1	6957	139.0	7131
No ice, no wind	100	112.0	6283	122.7	6477	133.6	6666	144.7	6851
Medium-Final									
1/4" ice, no wind	32	114.5	--	125.6	--	136.6	--	147.9	--
No ice, no wind	60	105.7	6666	115.9	6855	126.4	7042	137.1	7225
No ice, no wind	100	110.5	6352	121.1	6550	131.7	6743	142.7	6932
Light-Final									
No ice, no wind	60	104.9	6714	115.2	6904	125.6	7091	136.3	7275
No ice, no wind	100	109.9	6390	120.5	6588	131.1	6782	141.9	6971

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.50 Pounds per foot with Diameter 2.05 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	137.0	7996	147.8	8165	159.0	8334	170.5	8500
No ice, no wind	20	139.4	7849	150.3	8021	161.7	8193	173.3	8364
No ice, no wind	40	142.1	7704	153.2	7880	164.8	8053	176.4	8225
No ice, no wind	60	144.7	7560	156.0	7736	167.7	7912	179.5	8085
No ice, no wind	80	147.6	7418	159.0	7597	170.7	7776	182.6	7952
No ice, no wind	100	150.4	7282	161.9	7462	173.7	7640	185.6	7816
Heavy-Final									
1/2" ice, no wind	32	177.5	--	190.5	--	204.0	--	217.6	--
No ice, no wind	60	150.0	7302	161.7	7464	173.8	7625	185.8	7781
No ice, no wind	100	155.9	7028	167.9	7196	180.2	7362	192.5	7521
Medium-Final									
1/4" ice, no wind	32	159.4	--	171.7	--	184.3	--	197.1	--
No ice, no wind	60	147.8	7404	159.3	7580	171.1	7752	183.3	7922
No ice, no wind	100	153.8	7120	165.4	7297	177.3	7474	189.5	7645
Light-Final									
No ice, no wind	60	147.0	7456	158.2	7634	169.9	7808	181.8	7980
No ice, no wind	100	153.1	7158	164.5	7340	176.3	7517	188.3	7693

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	182.1	8666	193.9	8829	205.9	8990	218.1	9149
No ice, no wind	20	185.1	8534	197.1	8699	209.2	8862	221.5	9024
No ice, no wind	40	188.3	8396	200.4	8565	212.6	8732	225.0	8894
No ice, no wind	60	191.5	8256	203.6	8427	215.9	8594	228.4	8760
No ice, no wind	80	194.7	8126	206.9	8298	219.3	8466	213.9	8632
No ice, no wind	100	197.8	7991	210.2	8165	222.7	8336	235.4	8503
Heavy-Final									
1/2" ice, no wind	32	231.7	--	246.3	--	261.8	--	278.3	--
No ice, no wind	60	198.3	7932	211.3	8077	224.9	8211	239.4	8329
No ice, no wind	100	205.2	7677	218.3	7824	232.2	7961	246.9	8082
Medium-Final									
1/4" ice, no wind	32	210.1	--	223.3	--	236.9	--	250.8	--
No ice, no wind	60	195.6	8088	208.2	8252	221.1	8412	234.1	8568
No ice, no wind	100	202.0	7815	214.7	7981	227.7	8145	241.0	8304
Light-Final									
No ice, no wind	60	193.8	8149	206.2	8314	218.7	8476	231.3	8634
No ice, no wind	100	200.8	7865	213.4	8035	226.2	8201	239.4	8364

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
2.50 Pounds per foot with Diameter 2.05 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		700-ft.		725-ft.		750-ft.		775-ft.	
		Sag	Tension	Sag	Tension	Sag	Tension	Sag	Tension
	Temp. °F	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds
Initial									
No ice, no wind	0	230.4	9308	243.1	9460	256.3	9612	269.6	9762
No ice, no wind	20	234.0	9181	246.7	9337	259.9	9488	273.2	9638
No ice, no wind	40	237.6	9054	250.3	9212	263.5	9362	276.8	9518
No ice, no wind	60	241.2	8924	254.1	9084	267.4	9240	280.9	9393
No ice, no wind	80	244.8	8794	257.8	8953	271.2	9114	284.8	9269
No ice, no wind	100	248.4	8669	261.5	8830	275.0	8989	288.9	9146
Medium-Final									
1/2" ice, no wind	32	265.2	--	279.9	--	294.9	--	310.2	--
No ice, no wind	60	247.2	8724	260.8	8867	274.8	9009	289.1	9144
No ice, no wind	100	254.4	8461	268.3	8606	282.7	8747	297.5	8887
Light-Final									
No ice, no wind	60	244.2	8791	257.6	8942	271.5	9090	285.6	9235
No ice, no wind	100	252.6	8225	266.1	8682	280.0	8834	294.4	8984

Span Length		800-ft.	
		Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	283.2	9912
No ice, no wind	20	286.8	9785
No ice, no wind	40	290.4	9666
No ice, no wind	60	294.6	9545
No ice, no wind	80	289.8	9422
No ice, no wind	100	303.0	9299
Medium-Final			
1/4" ice, no wind	32	325.8	--
No ice, no wind	60	303.6	9267
No ice, no wind	100	312.6	9022
Light-Final			
No ice, no wind	60	300.0	9377
No ice, no wind	100	309.0	9132

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	9.8	5129	14.4	5361	19.9	5593	26.3	5822
No ice, no wind	20	10.3	4904	15.0	5145	20.7	5383	27.2	5620
No ice, no wind	40	10.9	4664	15.8	4913	21.7	5164	28.3	5412
No ice, no wind	60	11.5	4433	16.6	4691	22.5	4948	29.3	5204
No ice, no wind	80	12.1	4205	17.3	4475	23.4	4743	30.5	5007
No ice, no wind	100	12.8	3976	18.2	4258	24.5	4541	31.7	4817
Heavy-Final									
1/2" ice, no wind	32	14.9	--	21.2	--	28.5	--	36.8	--
No ice, no wind	60	11.9	4288	17.2	4556	23.3	4817	30.3	5070
No ice, no wind	100	13.4	3806	19.0	4092	25.6	4376	32.9	4652
Medium-Final									
1/4" ice, no wind	32	12.8	--	18.4	--	25.0	--	32.4	--
No ice, no wind	60	11.8	4335	17.0	4605	22.9	4869	29.8	5125
No ice, no wind	100	13.3	3855	18.7	4144	25.2	4431	32.4	4711
Light-Final									
No ice, no wind	60	11.6	4361	16.7	4632	22.6	4899	29.5	5159
No ice, no wind	100	13.2	3872	18.6	4166	25.0	4454	32.1	4737
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	33.4	6051	40.9	6276	49.2	6499	57.6	6721
No ice, no wind	20	34.3	5856	42.1	6090	50.4	6322	59.0	6550
No ice, no wind	40	35.6	5657	43.4	5900	51.9	6142	60.6	6380
No ice, no wind	60	36.7	5459	44.7	5711	53.3	5959	62.0	6206
No ice, no wind	80	38.0	5268	46.1	5526	54.8	5781	63.8	6036
No ice, no wind	100	39.4	5090	47.7	5358	56.5	5624	65.6	5885
Heavy-Final									
1/2" ice, no wind	32	45.7	--	55.3	--	65.5	--	76.1	--
No ice, no wind	60	38.0	5319	46.2	5557	55.1	5794	64.2	6027
No ice, no wind	100	40.9	4926	49.4	51.90	58.6	5449	68.0	5696
Medium-Final									
1/4" ice, no wind	32	40.5	--	49.2	--	58.4	--	68.1	--
No ice, no wind	60	37.4	5375	45.4	5620	54.1	5857	63.2	6093
No ice, no wind	100	40.3	4987	48.7	5255	57.7	5512	67.0	5766
Light-Final									
No ice, no wind	60	37.1	5411	45.2	5656	53.9	5898	62.9	6136
No ice, no wind	100	40.0	5014	48.3	5282	57.3	5542	66.5	5796

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	66.6	6941	75.8	7162	85.4	7382	95.2	7597
No ice, no wind	20	68.0	6776	77.4	7003	87.0	7228	96.9	7447
No ice, no wind	40	69.7	6618	79.2	6846	89.0	7072	99.0	7296
No ice, no wind	60	71.3	6450	81.0	6684	90.9	6915	101.1	7142
No ice, no wind	80	73.2	6288	82.9	6529	93.0	6765	103.3	6996
No ice, no wind	100	75.2	6141	85.0	6386	95.1	6625	105.5	6855
Heavy-Final									
1/2" ice, no wind	32	87.1	--	98.5	--	110.4	--	122.5	--
No ice, no wind	60	73.7	6256	83.5	6482	93.8	6705	104.2	6926
No ice, no wind	100	77.8	5941	88.0	6172	98.5	6400	109.2	6624
Medium-Final									
1/4" ice, no wind	32	78.1	--	88.7	--	99.5	--	110.6	--
No ice, no wind	60	72.6	6329	82.4	6557	92.7	6782	103.0	7006
No ice, no wind	100	76.7	6011	86.6	6252	97.1	6486	107.7	6714
Light-Final									
No ice, no wind	60	72.4	6369	82.0	6598	92.1	6825	102.3	7049
No ice, no wind	100	76.3	6045	86.0	6281	96.3	6516	106.9	6744

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	105.3	7811	115.8	8020	126.6	8225	137.8	8428
No ice, no wind	20	107.1	7665	117.7	7877	128.6	8086	139.9	8292
No ice, no wind	40	109.3	7512	119.9	7727	131.0	7941	142.4	8147
No ice, no wind	60	111.5	7365	122.3	7585	133.6	7802	144.9	8015
No ice, no wind	80	113.8	7221	124.7	7445	136.0	7664	147.3	7880
No ice, no wind	100	116.0	7082	127.1	7301	138.5	7519	150.0	7738
Heavy-Final									
1/2" ice, no wind	32	134.7	--	147.3	--	160.3	--	174.1	--
No ice, no wind	60	114.9	7142	126.0	7355	137.6	7565	149.7	7769
No ice, no wind	100	120.1	6846	131.5	7061	143.2	7276	155.4	7485
Medium-Final									
1/4" ice, no wind	32	121.8	--	133.3	--	145.3	--	157.8	--
No ice, no wind	60	113.6	7229	124.5	7445	136.0	7664	147.7	7870
No ice, no wind	100	118.5	6936	129.7	7151	141.4	7363	153.3	7576
Light-Final									
No ice, no wind	60	112.8	7270	123.8	7488	135.1	7704	146.6	7917
No ice, no wind	100	117.7	6966	128.9	7185	140.6	7404	152.3	7620

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	149.3	8628	161.2	8827	173.1	9024	185.2	9218
No ice, no wind	20	151.5	8494	163.4	8695	175.5	8896	187.8	9091
No ice, no wind	40	154.0	8354	166.0	8557	178.1	8758	190.5	8956
No ice, no wind	60	156.6	8225	168.6	8431	180.8	8632	193.3	8831
No ice, no wind	80	159.1	8090	171.3	8297	183.6	8500	196.1	8700
No ice, no wind	100	161.8	7946	174.1	8154	186.6	8362	199.3	8565
Heavy-Final									
1/2" ice, no wind	32	188.0	--	202.4	--	217.2	--	232.5	--
No ice, no wind	60	162.1	7968	174.8	8154	187.7	8326	201.0	8484
No ice, no wind	100	168.0	7687	180.7	7879	193.8	8059	207.4	8222
Medium-Final									
1/4" ice, no wind	32	170.6	--	183.6	--	196.9	--	210.2	--
No ice, no wind	60	159.6	8075	171.8	8275	184.2	8470	196.8	8656
No ice, no wind	100	165.4	7786	177.7	7989	190.2	8190	202.9	8382
Light-Final									
No ice, no wind	60	158.3	8129	170.3	8337	182.3	8539	194.9	8735
No ice, no wind	100	164.3	7831	176.5	8039	188.9	8244	201.5	8446

Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	197.5	9408	210.0	9595	222.6	9782	235.6	9964
No ice, no wind	20	200.3	9282	212.9	9470	225.6	9658	238.7	9838
No ice, no wind	40	203.1	9149	215.7	9341	228.6	9530	241.6	9712
No ice, no wind	60	205.9	9026	218.6	9217	231.6	9406	244.9	9591
No ice, no wind	80	208.8	8895	221.6	9089	234.6	9282	248.1	9467
No ice, no wind	100	212.1	8765	225.0	8961	238.2	9155	251.8	9340
Heavy-Final									
1/2" ice, no wind	32	248.3	--	264.3	--				
No ice, no wind	60	214.9	8636	229.7	8757				
No ice, no wind	100	221.7	8374	236.8	8509				
Medium-Final									
1/4" ice, no wind	32	224.1	--	238.3	--	253.2	--	267.8	--
No ice, no wind	60	209.7	8837	223.1	9014	237.0	9189	251.1	9357
No ice, no wind	100	216.0	8567	229.6	8747	243.6	8921	258.0	9085
Light-Final									
No ice, no wind	60	207.7	8922	220.8	9103	234.6	9282	248.3	9449
No ice, no wind	100	214.6	8640	227.9	8828	214.8	9013	255.7	9187

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.00 Pounds per foot with Diameter 2.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length	Temp. °F	700-ft. Sag in Inches	700-ft. Tension in Pounds	725-ft. Sag in Inches	725-ft. Tension in Pounds	750-ft. Sag in Inches	750-ft. Tension in Pounds
Initial							
No ice, no wind	0	249.0	10145	262.7	10322	276.6	10496
No ice, no wind	20	252.1	10017	265.7	10194	279.6	10368
No ice, no wind	40	255.1	9896	268.7	10076	282.6	10253
No ice, no wind	60	258.4	9772	272.1	9950	286.2	10126
No ice, no wind	80	262.0	9649	276.0	9830	290.4	10004
No ice, no wind	100	265.6	9525	279.7	9704	294.0	9877
Medium-Final							
1/4" ice, no wind	32	283.0	--	298.7	--	315.0	--
No ice, no wind	60	265.7	9518	280.9	9667	296.4	9802
No ice, no wind	100	272.9	9245	288.3	9401	304.2	9554
Light-Final							
No ice, no wind	60	262.5	9617	277.0	9780	292.2	9941
No ice, no wind	100	270.2	9357	285.0	9522	300.0	9686

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.50 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	11.1	5265	15.9	5525	21.7	5787	28.4	6049
No ice, no wind	20	11.5	5028	16.7	5303	22.6	5577	29.6	5850
No ice, no wind	40	12.1	4806	17.4	5098	23.6	5387	30.6	5669
No ice, no wind	60	12.8	4586	18.3	4888	24.6	5187	31.8	5481
No ice, no wind	80	13.5	4366	19.1	4685	25.6	4996	33.1	5298
No ice, no wind	100	14.2	4150	19.9	4484	26.7	4807	34.3	5122
Heavy-Final									
1/2" ice, no wind	32	16.2	--	23.1	--	31.2	--	40.0	--
No ice, no wind	60	13.3	4442	18.9	4742	25.5	5036	32.9	5322
No ice, no wind	100	14.8	3979	20.6	4307	27.4	4628	35.1	4938
Medium-Final									
1/4" ice, no wind	32	14.0	--	20.0	--	27.2	--	35.1	--
No ice, no wind	60	13.1	4499	18.7	4801	25.1	5095	32.4	5386
No ice, no wind	100	14.6	4028	20.3	4356	27.0	4679	34.7	4990
Light-Final									
No ice, no wind	60	13.0	4520	18.6	4825	25.0	5123	32.3	5416
No ice, no wind	100	14.5	4049	20.1	4383	26.8	4709	34.4	5025

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	36.0	6310	44.1	6572	52.9	6832	62.1	7089
No ice, no wind	20	37.3	6123	45.5	6392	54.4	6658	63.7	6920
No ice, no wind	40	38.5	5947	46.8	6222	55.8	6494	65.3	6762
No ice, no wind	60	39.8	5771	48.3	6050	57.5	6327	67.1	6597
No ice, no wind	80	41.2	5595	49.8	5876	59.2	6155	68.8	6433
No ice, no wind	100	42.4	5427	51.3	5719	60.7	6006	70.4	6289
Heavy-Final									
1/2" ice, no wind	32	49.6	--	59.7	--	70.2	--	81.5	
No ice, no wind	60	41.1	5606	49.8	5888	59.2	6161	69.1	6428
No ice, no wind	100	43.5	5242	52.6	5532	62.2	5818	172.4	6099
Medium-Final									
1/4" ice, no wind	32	43.7	--	52.9	--	62.8	--	73.1	--
No ice, no wind	60	40.6	5670	49.2	5947	58.5	6220	68.2	6490
No ice, no wind	100	43.1	5297	52.0	5592	61.5	5885	71.6	6167
Light-Final									
No ice, no wind	60	40.4	5704	49.0	5984	58.2	6255	67.9	6225
No ice, no wind	100	42.6	5334	51.5	5630	61.0	5921	71.0	6204

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.50 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	71.7	7343	81.7	7595	91.7	7843	102.0	8087
No ice, no wind	20	73.5	7180	83.5	7437	93.6	7691	104.1	7940
No ice, no wind	40	75.1	7025	85.2	7284	95.3	7540	106.0	7791
No ice, no wind	60	77.0	6866	87.2	7130	97.3	7390	108.1	7644
No ice, no wind	80	78.9	6706	89.2	6975	99.5	7242	110.3	7494
No ice, no wind	100	80.6	6567	90.9	6842	101.4	7112	112.2	7368
Heavy-Final									
1/2" ice, no wind	32	93.0	--	104.4	--	116.2	--	128.4	--
No ice, no wind	60	79.2	6688	89.6	6940	100.2	7190	111.7	7429
No ice, no wind	100	83.0	6370	93.7	6634	104.6	6892	116.2	7135
Medium-Final									
1/4" ice, no wind	32	83.7	--	94.6	--	105.6	--	117.1	--
No ice, no wind	60	78.3	6754	88.7	7014	99.1	7271	110.2	7516
No ice, no wind	100	82.0	6444	92.7	6711	103.4	6976	114.7	7231
Light-Final									
No ice, no wind	60	78.0	6790	88.3	7050	98.6	7308	109.4	7555
No ice, no wind	100	81.4	6479	92.0	6747	102.8	7011	113.7	7264

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	112.8	8328	123.8	8565	135.2	8797	146.8	9026
No ice, no wind	20	114.9	8184	126.0	8424	137.2	8658	149.0	8890
No ice, no wind	40	116.9	8037	128.0	8279	139.4	8517	151.3	8751
No ice, no wind	60	119.1	7893	130.4	8138	141.9	8378	154.0	8615
No ice, no wind	80	121.4	7745	132.7	7992	144.5	8236	156.7	8475
No ice, no wind	100	123.4	7620	134.8	7868	146.7	8110	158.9	8348
Heavy-Final									
1/2" ice, no wind	32	141.0	--	153.8	--	167.0	--	180.7	--
No ice, no wind	60	123.8	7663	136.1	7894	148.7	8118	161.7	8331
No ice, no wind	100	128.6	7376	141.1	7610	153.8	7841	167.0	8057
Medium-Final									
1/4" ice, no wind	32	129.2	--	141.5	--	154.1	--	167.1	--
No ice, no wind	60	121.5	7757	133.1	7996	145.0	8227	157.4	8457
No ice, no wind	100	126.3	7480	138.1	7722	150.2	7957	162.7	8185
Light-Final									
No ice, no wind	60	120.7	7799	132.0	8040	143.7	8275	155.8	8505
No ice, no wind	100	125.2	7518	136.8	7767	148.7	8013	161.1	8250

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.50 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
		Sag	Tension	Sag	Tension	Sag	Tension	Sag	Tension
	Temp. °F	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds	in Inches	in Pounds
Initial									
No ice, no wind	0	158.8	9250	171.2	9470	183.9	9689	196.8	9905
No ice, no wind	20	161.1	9117	173.6	9341	186.3	9561	199.2	9779
No ice, no wind	40	163.6	8980	176.2	9207	189.1	9429	202.1	9650
No ice, no wind	60	166.3	8847	179.1	9075	191.9	9299	205.0	9520
No ice, no wind	80	169.2	8709	181.9	8940	194.9	9167	208.0	9389
No ice, no wind	100	171.5	8582	184.5	8812	197.5	9040	210.9	9262
Heavy-Final									
1/2" ice, no wind	32	194.8	--	209.9	--	225.8	--		
No ice, no wind	60	175.2	8530	189.1	8712	203.3	8884		
No ice, no wind	100	180.7	8263	194.7	8452	208.9	8627		
Medium-Final									
1/4" ice, no wind	32	180.6	--	194.5	--	208.6	--	223.0	--
No ice, no wind	60	170.0	8682	183.1	8900	196.5	9113	210.0	9317
No ice, no wind	100	175.7	8407	189.0	8625	202.5	8837	216.4	9045
Light-Final									
No ice, no wind	60	168.4	8735	181.3	8960	194.4	9178	207.7	9393
No ice, no wind	100	173.9	8483	187.0	8707	200.4	8925	213.9	9136
Span Length		600-ft.		625-ft.		650-ft.		675-ft.	
Initial									
No ice, no wind	0	210.0	10117	223.5	10324	237.4	10526	251.4	10725
No ice, no wind	20	212.4	9993	225.9	10202	239.8	10406	253.9	10607
No ice, no wind	40	215.4	9866	228.9	10074	242.8	10282	256.9	10486
No ice, no wind	60	218.4	9738	232.0	9949	245.9	10160	259.9	10368
No ice, no wind	80	221.4	9608	235.0	9826	249.0	10036	263.1	10245
No ice, no wind	100	224.4	9481	238.1	9700	252.2	9917	266.4	10127
Medium-Final									
1/2" ice, no wind	32	237.6	--	253.0	--	268.8	--	285.0	--
No ice, no wind	60	223.8	9516	238.0	9700	252.8	9877	268.3	10038
No ice, no wind	100	230.4	9250	244.8	9442	259.7	9624	275.5	9788
Light-Final									
No ice, no wind	60	221.4	9606	235.1	9812	249.5	10005	264.3	10189
No ice, no wind	100	228.0	9343	241.9	9541	256.4	9738	271.3	9926

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
3.50 Pounds per foot with Diameter 2.40 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		700-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	265.8	10923
No ice, no wind	20	268.2	10805
No ice, no wind	40	271.2	10686
No ice, no wind	60	274.2	10571
No ice, no wind	80	277.5	10449
No ice, no wind	100	280.8	10334
Light-Final			
No ice, no wind	60	280.2	10357
No ice, no wind	100	287.4	10103

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.00 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	12.2	5384	17.6	5709	23.9	6027	31.1	6334
No ice, no wind	20	12.8	5161	18.3	5492	24.8	5820	32.2	6138
No ice, no wind	40	13.4	4941	19.1	5278	25.7	5611	33.2	5939
No ice, no wind	60	14.0	4733	19.9	5076	26.6	5414	34.3	5746
No ice, no wind	80	14.6	4525	20.6	4876	27.5	5220	35.3	5559
No ice, no wind	100	15.4	4320	21.5	4680	28.5	5033	36.5	5380
Heavy-Final									
1/2" ice, no wind	32	17.3	--	24.4	--	32.2	--	41.3	--
No ice, no wind	60	14.5	4600	20.6	4936	27.5	5266	35.5	5590
No ice, no wind	100	16.0	4161	22.3	4514	29.5	4863	37.8	5207
Medium-Final									
1/4" ice, no wind	32	15.2	--	21.5	--	28.8	--	37.1	--
No ice, no wind	60	14.3	4647	20.2	4989	27.2	5323	34.9	5651
No ice, no wind	100	15.8	4205	22.0	4565	29.2	4918	37.3	5265
Light-Final									
No ice, no wind	60	14.2	4670	20.1	5010	26.9	5347	34.7	5680
No ice, no wind	100	15.7	4219	21.9	4580	29.0	4937	37.1	5287
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	39.2	6633	47.9	6926	57.2	7209	67.0	7487
No ice, no wind	20	40.4	6449	49.1	6749	58.6	7043	68.5	7325
No ice, no wind	40	41.5	6260	50.4	6573	59.9	6876	70.0	7170
No ice, no wind	60	42.7	6072	51.7	6392	61.4	6704	71.7	7006
No ice, no wind	80	43.8	5893	52.9	6221	62.7	6540	73.0	6849
No ice, no wind	100	45.2	5721	54.4	6054	64.4	6385	74.6	6699
Heavy-Final									
1/2" ice, no wind	32	51.2	--	61.6	--	72.8	--	84.5	--
No ice, no wind	60	44.1	5908	53.4	6221	63.3	6527	73.5	6825
No ice, no wind	100	46.7	5545	56.3	5876	66.5	6200	77.1	6512
Medium-Final									
1/4" ice, no wind	32	46.1	--	55.8	--	66.2	--	77.0	--
No ice, no wind	60	43.5	5975	52.7	6291	62.5	6600	72.7	6898
No ice, no wind	100	46.1	5606	55.6	5941	65.7	6266	76.2	6581
Light-Final									
No ice, no wind	60	43.1	6006	52.3	6324	62.1	6632	72.3	6931
No ice, no wind	100	45.8	5631	55.2	5967	65.4	6295	75.7	6610

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.00 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	77.2	7762	87.7	8038	98.4	8312	109.4	8580
No ice, no wind	20	78.7	7606	89.3	7885	100.1	8162	111.2	8435
No ice, no wind	40	80.3	7456	91.0	7740	101.9	8019	113.0	8292
No ice, no wind	60	82.0	7300	92.9	7585	103.8	7867	115.1	8144
No ice, no wind	80	83.6	7152	94.5	7439	105.7	7724	116.9	8004
No ice, no wind	100	85.4	7011	96.3	7301	107.4	7586	118.8	7868
Heavy-Final									
1/2" ice, no wind	32	96.5	--	109.2	--	122.2	--	135.5	--
No ice, no wind	60	84.2	7112	95.6	7395	107.3	7672	119.2	7944
No ice, no wind	100	88.1	6817	99.6	7107	111.6	7391	123.7	7666
Medium-Final									
1/4" ice, no wind	32	88.2	--	99.6	--	111.5	--	123.6	--
No ice, no wind	60	83.3	7190	94.3	7475	105.6	7755	117.1	8031
No ice, no wind	100	87.0	6889	98.2	7176	109.6	7457	121.3	7732
Light-Final									
No ice, no wind	60	82.9	7224	93.8	7514	105.0	7799	116.3	8080
No ice, no wind	100	86.6	6924	97.7	7214	109.0	7497	120.5	7777

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	120.7	8843	132.3	9104	144.4	9361	156.7	9612
No ice, no wind	20	122.5	8702	134.3	8966	146.4	9224	158.9	9479
No ice, no wind	40	124.4	8562	136.3	8828	148.5	9089	161.1	9347
No ice, no wind	60	126.6	8417	138.6	8685	150.9	8950	163.5	9211
No ice, no wind	80	128.7	8279	140.7	8550	153.2	8817	166.0	9082
No ice, no wind	100	130.7	8144	142.8	8417	155.4	8684	168.3	8948
Heavy-Final									
1/2" ice, no wind	32	149.2	--	163.4	--	178.0	--	192.8	--
No ice, no wind	60	131.5	8200	144.2	8441	157.2	8662	170.6	8875
No ice, no wind	100	136.2	7928	149.1	8170	162.3	8397	176.0	8612
Medium-Final									
1/4" ice, no wind	32	136.0	--	148.9	--	162.0	--	175.6	--
No ice, no wind	60	128.9	8300	141.1	8561	153.7	8817	166.7	9060
No ice, no wind	100	133.4	8001	145.9	8268	158.7	8529	171.8	8788
Light-Final									
No ice, no wind	60	127.9	8351	140.1	8617	152.5	8874	165.3	9125
No ice, no wind	100	132.5	8052	144.9	8324	157.6	8589	170.5	8846

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.00 Pounds per foot with Diameter 2.50 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	169.3	9860	182.5	10100	195.8	10337	209.4	10568
No ice, no wind	20	171.6	9728	184.9	9972	198.3	10212	212.0	10449
No ice, no wind	40	173.9	9597	187.2	9846	200.7	10088	214.5	10327
No ice, no wind	60	176.4	9467	189.8	9719	203.3	9963	217.2	10203
No ice, no wind	80	178.9	9340	192.3	9592	205.8	9841	219.7	10082
No ice, no wind	100	181.4	9207	194.8	9460	208.5	9708	222.4	9954
Heavy-Final									
1/2" ice, no wind	32	208.1	--						
No ice, no wind	60	184.4	9062						
No ice, no wind	100	190.0	8799						
Medium-Final									
1/4" ice, no wind	32	189.6	--	204.1	--	219.1	--	234.7	--
No ice, no wind	60	179.8	9299	193.7	9531	208.1	9752	223.0	9964
No ice, no wind	100	185.0	9025	199.1	9249	213.5	9467	228.6	9682
Light-Final									
No ice, no wind	60	178.2	9369	191.7	9608	205.6	9841	219.9	10069
No ice, no wind	100	183.7	9094	197.3	9330	211.3	9560	225.8	9782

Span Length		600-ft.		625-ft.		650-ft.	
Initial							
No ice, no wind	0	223.3	10795	237.2	11020	251.4	11241
No ice, no wind	20	226.0	10681	240.0	10907	254.4	11131
No ice, no wind	40	228.4	10562	242.5	10792	256.8	11016
No ice, no wind	60	231.2	10439	245.4	10671	259.8	10900
No ice, no wind	80	233.6	10320	247.7	10554	262.2	10785
No ice, no wind	100	236.4	10194	250.6	10432	265.2	10663
Medium-Final							
1/4" ice, no wind	32	250.8	--	267.0	--		
No ice, no wind	60	238.4	10156	254.0	10336		
No ice, no wind	100	244.1	9886	259.8	10080		
inal							
no wind	60	234.7	10287	249.8	10492	265.2	10681
o wind	100	240.9	10003	256.2	10220	271.8	10432

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.50 Pounds per foot with Diameter 2.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	13.3	5511	19.2	5869	26.2	6214	34.0	6554
No ice, no wind	20	13.9	5306	20.0	5673	27.0	6029	35.0	6374
No ice, no wind	40	14.5	5098	20.8	5472	27.8	5839	36.0	6197
No ice, no wind	60	15.1	4892	21.5	5271	28.8	5644	37.1	6011
No ice, no wind	80	15.8	4687	22.3	5072	29.8	5451	38.1	5825
No ice, no wind	100	16.4	4496	23.1	4890	30.7	5274	39.2	5654
Heavy-Final									
1/2" ice, no wind	32	18.2	--	25.7	--	34.3	--	43.9	--
No ice, no wind	60	15.5	4774	22.0	5141	29.6	5502	38.0	5858
No ice, no wind	100	17.0	4340	23.8	4738	31.7	5131	40.5	5509
Medium-Final									
1/4" ice, no wind	32	16.2	--	23.1	--	31.0	--	39.8	--
No ice, no wind	60	15.4	4814	21.9	5184	29.4	5549	37.7	5908
No ice, no wind	100	16.9	4381	23.7	4778	31.5	5173	40.1	5559
Light-Final									
No ice, no wind	60	15.2	4837	21.6	5211	29.0	5580	37.3	5940
No ice, no wind	100	16.8	4404	23.6	4803	31.3	5200	139.8	5586

Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	42.5	6880	51.6	7201	61.4	7516	71.5	7825
No ice, no wind	20	43.6	6712	52.9	7039	62.8	7360	73.1	7673
No ice, no wind	40	44.8	6545	54.2	6882	64.2	7210	74.6	7530
No ice, no wind	60	45.9	6370	55.4	6716	65.5	7054	76.0	7381
No ice, no wind	80	47.1	6192	56.8	6551	67.0	6901	77.5	7231
No ice, no wind	100	48.3	6029	58.1	6396	68.5	6753	79.0	7090
Heavy-Final									
1/2" ice, no wind	32	54.1	--	65.0	--	76.7	--	88.9	--
No ice, no wind	60	47.1	6209	56.8	6549	67.1	6878	78.2	7207
No ice, no wind	100	49.8	5873	59.8	6225	70.4	6571	81.6	6907
Medium-Final									
1/4" ice, no wind	32	49.3	--	59.4	--	70.2	--	81.4	--
No ice, no wind	60	46.7	6262	56.3	6609	66.6	6947	77.3	7266
No ice, no wind	100	49.4	5927	59.3	6286	69.8	6635	80.7	6973
Light-Final									
No ice, no wind	60	46.3	6297	55.9	6647	66.1	6987	76.7	7307
No ice, no wind	100	49.1	5956	58.9	6319	69.4	6670	80.1	7014

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.50 Pounds per foot with Diameter 2.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	82.1	8133	92.9	8438	104.0	8738	115.4	9034
No ice, no wind	20	83.8	7984	94.7	8292	105.8	8594	117.3	8893
No ice, no wind	40	85.4	7845	96.4	8155	107.6	8461	119.3	8761
No ice, no wind	60	86.9	7702	97.9	8019	109.3	8331	121.0	8636
No ice, no wind	80	88.5	7557	99.6	7878	111.1	8192	123.0	8498
No ice, no wind	100	90.1	7421	101.4	7746	112.8	8062	124.8	8370
Heavy-Final									
1/2" ice, no wind	32	101.6	--	114.5	--	127.7	--	141.5	--
No ice, no wind	60	89.5	7527	101.2	7836	113.2	8131	125.7	8407
No ice, no wind	100	93.3	7234	105.1	7548	117.3	7845	129.8	8127
Medium-Final									
1/4" ice, no wind	32	93.1	--	104.9	--	117.0	--	129.6	--
No ice, no wind	60	88.3	7580	99.5	7887	111.1	8192	123.0	8491
No ice, no wind	100	92.0	7303	103.4	7622	115.1	7929	127.3	8232
Light-Final									
No ice, no wind	60	87.6	7624	98.7	7935	110.2	8242	122.0	8543
No ice, no wind	100	91.3	7351	102.7	7674	114.3	7985	126.4	8287
Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	127.2	9322	139.5	9612	151.9	9895	164.7	10168
No ice, no wind	20	129.3	9187	141.5	9477	154.0	9764	166.8	10043
No ice, no wind	40	131.3	9057	143.7	9347	156.2	9634	169.1	9913
No ice, no wind	60	133.2	8933	145.6	9220	158.4	9501	171.3	9784
No ice, no wind	80	135.2	8797	147.8	9085	160.7	9371	173.6	9652
No ice, no wind	100	137.0	8669	149.8	8961	162.8	9247	175.9	9532
Heavy-Final									
1/2" ice, no wind	32	155.6	--	170.2	--	185.2	--		
No ice, no wind	60	138.5	8666	151.5	8910	164.9	9132		
No ice, no wind	100	142.8	8394	156.2	8642	169.8	8877		
Medium-Final									
1/4" ice, no wind	32	142.5	--	155.9	--	169.6	--	184.0	--
No ice, no wind	60	135.4	8786	148.0	9072	161.2	9345	174.8	9605
No ice, no wind	100	139.8	8525	152.7	8811	165.8	9085	179.8	9342
Light-Final									
No ice, no wind	60	134.3	8840	146.8	9132	159.8	9412	173.1	9688
No ice, no wind	100	138.9	8581	151.7	8867	164.8	9146	178.5	9414

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
4.50 Pounds per foot with Diameter 2.65 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	177.9	10436	191.6	10697	205.5	10949	220.0	11195
No ice, no wind	20	180.1	10313	193.8	10576	207.9	10832	222.1	11079
No ice, no wind	40	182.3	10185	196.1	10451	210.1	10709	224.6	10964
No ice, no wind	60	184.5	10062	198.3	10331	212.6	10589	227.2	10842
No ice, no wind	80	186.9	9930	200.7	10200	215.1	10462	229.8	10721
No ice, no wind	100	189.3	9811	203.1	10079	217.4	10344	232.4	10600
Medium-Final									
1/4" ice, no wind	32	199.0	--	214.4	--	230.2	--		
No ice, no wind	60	188.9	9851	203.4	10077	218.7	10295		
No ice, no wind	100	193.9	9584	208.5	9815	223.7	10034		
Light-Final									
No ice, no wind	60	187.1	9957	201.4	10211	216.0	10442	231.1	10663
No ice, no wind	100	192.5	9677	207.0	9929	221.8	10167	237.0	10403

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
5.00 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		100-ft.		125-ft.		150-ft.		175-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	14.3	5664	20.5	6049	27.8	6427	36.0	6793
No ice, no wind	20	14.8	5453	21.2	5848	28.6	6236	36.9	6616
No ice, no wind	40	15.4	5248	21.9	5648	29.5	6044	37.9	6434
No ice, no wind	60	16.0	5048	22.7	5456	30.3	5858	38.9	6252
No ice, no wind	80	16.7	4855	23.5	5283	31.3	5699	40.1	6100
No ice, no wind	100	17.4	4661	24.3	5094	32.3	5520	41.1	5936
Heavy-Final									
1/2" ice, no wind	32	19.1	--	26.9	--	35.8	--	45.7	--
No ice, no wind	60	16.3	4924	23.3	5327	31.0	5720	39.9	6109
No ice, no wind	100	18.0	4517	25.3	4940	33.5	5352	42.5	5759
Medium-Final									
1/4" ice, no wind	32	17.2	--	24.3	--	32.5	--	41.6	--
No ice, no wind	60	16.2	4970	23.0	5377	30.8	5780	39.6	6175
No ice, no wind	100	17.9	4560	25.0	4984	33.1	5402	42.1	5810
Light-Final									
No ice, no wind	60	16.2	4993	22.9	5403	30.7	5810	39.4	6207
No ice, no wind	100	17.8	4577	24.9	5004	32.9	5424	41.9	5836
Span Length		200-ft.		225-ft.		250-ft.		275-ft.	
Initial									
No ice, no wind	0	44.9	7149	54.2	7498	64.6	7843	75.4	8184
No ice, no wind	20	46.0	6985	55.7	7344	66.0	7695	76.8	8040
No ice, no wind	40	47.1	6815	56.9	7187	67.4	7548	78.3	7895
No ice, no wind	60	48.3	6642	58.1	7024	68.8	7398	79.7	7751
No ice, no wind	80	49.5	6490	59.5	6876	70.2	7250	81.3	7612
No ice, no wind	100	50.7	6340	60.9	6727	71.6	7109	82.8	7473
Heavy-Final									
1/2" ice, no wind	32	56.4	--	67.7	--	79.7	--	92.5	--
No ice, no wind	60	49.4	6490	59.6	6862	70.4	7224	81.9	7569
No ice, no wind	100	52.3	6159	62.6	6550	73.6	6933	85.4	7293
'-1	32	51.5	—	62.0	—	73.3	--	84.8	--
	60	49.0	6560	59.0	6935	69.8	7297	80.9	7645
	100	51.7	6213	62.0	6607	72.8	6993	84.2	7357
	60	48.8	6595	58.7	6972	69.4	7340	80.4	7692
	100	51.5	6241	61.7	6639	72.6	7028	83.8	7391

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
5.00 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	86.4	8524	97.7	8858	109.2	9184	121.2	9503
No ice, no wind	20	87.9	8381	99.2	8717	110.8	9044	122.9	9367
No ice, no wind	40	89.4	8237	100.8	8576	112.5	8907	124.6	9233
No ice, no wind	60	90.9	8097	102.4	8439	114.2	8774	126.4	9100
No ice, no wind	80	92.6	7965	104.2	8305	116.0	8636	128.5	8960
No ice, no wind	100	94.2	7832	105.9	8182	117.8	8518	130.3	8843
Heavy-Final									
1/2" ice, no wind	32	105.6	--	119.0	--	132.8	--	147.0	--
No ice, no wind	60	93.8	7906	106.0	8224	118.4	8534	131.4	8816
No ice, no wind	100	97.5	7640	109.8	7967	122.4	8275	135.6	8567
Medium-Final									
1/4" ice, no wind	32	96.9	--	109.3	--	121.9	--	134.9	--
No ice, no wind	60	92.5	7985	104.2	8315	116.2	8636	128.7	8950
No ice, no wind	100	95.9	7701	107.8	8032	120.0	8355	132.7	8672
Light-Final									
No ice, no wind	60	91.8	8037	103.4	8373	115.3	8697	127.6	9015
No ice, no wind	100	95.3	7741	107.1	8078	119.2	8406	131.7	8730

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	133.6	9814	146.3	10114	159.3	10408	172.8	10698
No ice, no wind	20	135.3	9682	148.1	9984	161.3	10284	174.8	10575
No ice, no wind	40	137.1	9550	150.0	9860	163.2	10161	176.8	10455
No ice, no wind	60	139.0	9417	152.0	9727	165.4	10031	179.1	10331
No ice, no wind	80	141.2	9280	154.2	9594	167.6	9900	181.4	10204
No ice, no wind	100	143.1	9162	156.3	9473	169.7	9778	183.4	10081
Heavy-Final									
1/2" ice, no wind	32	161.7	--	176.9	--				
No ice, no wind	60	144.7	9085	158.5	9331				
No ice, no wind	100	149.1	8836	163.0	9077				
Medium-Final									
1/4" ice, no wind	32	148.5	--	162.4	--	176.7	--	191.9	--
No ice, no wind	60	141.5	9257	154.7	9562	168.6	9845	183.0	10106
No ice, no wind	100	145.7	8984	159.2	9291	173.1	9575	187.7	9841
Light-Final									
No ice, no wind	60	140.3	9325	153.5	9632	167.0	9927	181.0	10210
No ice, no wind	100	144.6	9049	157.9	9363	171.6	9666	185.7	9954

TABLE III

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
7/16" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
5.00 Pounds per foot with Diameter 2.80 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 3800 pounds at 60°F

Span Length		500-ft.	
		Sag	Tension
	Temp. °F	in Inches	in Pounds
Initial			
No ice, no wind	0	186.6	10981
No ice, no wind	20	188.6	10865
No ice, no wind	40	190.7	10747
No ice, no wind	60	193.1	10629
No ice, no wind	80	195.4	10504
No ice, no wind	100	197.5	10383
Medium-Final			
1/4" ice, no wind	32	208.0	--
No ice, no wind	60	198.5	10345
No ice, no wind	100	203.5	10091
Light-Final			
No ice, no wind	60	195.8	10478
No ice, no wind	100	200.9	10224

Table 1b

Installation Sags and Tensions for Messenger Only Before Installing Plastic-Sheath Telephone Cable on 1/4" (7-wire) Extra High Strength Galvanized Steel Strand.

Span Length Feet	Temperature in Degrees Fahrenheit 0	20	40	60	80	100
			Tension in Pounds			
100	1390	1293	1197	1100	999	898
150	1388	1292	1196	1100	1001	902
200	1385	1290	1195	1100	1002	905
250	1380	1288	1194	1100	1004	910
300	1375	1285	1192	1100	1006	915
350	1369	1281	1190	1100	1008	920
400	1364	1277	1188	1100	1012	925
450	1357	1271	1186	1100	1015	931
500	1349	1265	1182	1100	1018	936
550	1342	1260	1179	1100	1020	942
600	1334	1253	1175	1100	1024	947
650	1328	1248	1172	1100	1028	954
700	1322	1245	1171	1100	1031	961
750	1316	1242	1170	1100	1033	969
			Sag in Inches			
100	1.3	1.4	1.6	1.7	1.8	1.9
150	2.9	3.1	3.3	3.6	4.0	4.4
200	5.1	5.5	6.0	6.5	7.2	8.0
250	8.1	8.7	9.4	10.2	11.2	12.4
300	11.8	12.7	13.7	14.8	16.2	17.9
350	16.2	17.3	18.7	20.2	22.0	24.2
400	21.2	22.7	24.4	26.4	28.7	31.6
450	27.2	29.2	31.3	33.8	36.5	39.8
500	33.6	36.0	38.6	41.6	44.9	48.5
550	40.7	43.4	46.5	49.9	53.8	57.6
600	48.2	51.6	55.2	58.9	63.1	67.4
650	56.9	60.6	64.7	69.1	73.8	78.7
700	67.2	71.5	76.0	80.8	86.1	91.8
750	77.9	82.6	87.7	93.2	99.0	105.2

TABLE 1c

Maximum Spans for 1/4" (7-wire)
Extra High Strength Galvanized Steel
Messenger Strand Supporting (by Lashing)
Plastic-Sheath Telephone Cables.

Telephone Cable Pounds per Foot	Telephone Cable Diameter in Inches	Maximum Span in Feet: Tension not to exceed 50% of Rated Strength with NESC Storm Loads — Heavy Loading District	Medium Loading District	Light Loading District	Tension not to exceed 60% Rated Strength with NESC Storm Loads — Heavy Loading District	Medium Loading District	Light Loading District
0.20	0.60	509	750+	750+	722	750+	750+
0.40	0.90	407	635	750+	574	750+	750+
0.60	1.10	347	524	645	490	700+	700+
0.80	1.20	311	454	558	438	600+	600+
1.00	1.40	274	392	485	384	550	550+
1.20	1.50	251	353	424	355	494	500+
1.40	1.60	234	318	384	328	448	450+
1.60	1.70	215	292	350	303	409	450+
1.80	1.80	201	268	321	282	377	400+
2.00	1.90	186	248	297	261	349	413+

TABLE 2b

Installation Sags and Tensions for
Messenger Only Before Installing Plastic-
Sheath Telephone Cable on 5/16" (7-wire)
Extra High Strength Galvanized Steel Strand.

Span Length Feet	Temperature in Degrees Fahrenheit 0	20	40	60	80	100
			Tension in Pounds			
100	2476	2320	2163	2000	1833	1665
150	2471	2316	2161	2000	1836	1671
200	2466	2312	2159	2000	1839	1677
250	2461	2308	2156	2000	1842	1683
300	2456	2303	2153	2000	1845	1689
350	2450	2298	2149	2000	1848	1696
400	2442	2293	2145	2000	1851	1703
450	2432	2287	2142	2000	1854	1710
500	2422	2281	2139	2000	1858	1717
550	2412	2274	2136	2000	1862	1724
600	2402	2267	2133	2000	1866	1732
650	2392	2260	2130	2000	1870	1740
700	2382	2253	2127	2000	1874	1749
750	2372	2246	2123	2000	1879	1759
800	2362	2239	2119	2000	1884	1769
850	2351	2232	2115	2000	1889	1779
900	2340	2225	2111	2000	1894	1790
			Sag in Inches			
100	1.1	1.2	1.3	1.5	1.6	1.7
150	2.8	2.9	3.1	3.4	3.7	4.1
200	4.8	5.2	5.6	6.1	6.7	7.3
250	7.7	8.3	8.9	9.6	10.3	11.3
300	11.3	12.0	12.8	13.7	14.9	16.3
350	15.1	16.2	17.4	18.7	20.3	22.2
400	20.0	21.4	22.9	24.6	26.6	28.8
450	25.6	27.1	29.0	31.3	33.7	36.5
500	31.6	33.5	35.7	38.3	41.3	44.6
550	38.3	40.6	43.4	46.4	49.9	53.8
600	46.2	48.8	51.8	55.4	59.3	63.7
650	54.1	57.5	61.6	65.1	69.5	74.4
700	63.2	67.0	70.9	75.4	80.3	85.7
750	72.8	76.9	81.4	86.4	91.9	98.2
800	83.3	88.0	93.0	98.5	104.8	110.8
850	94.3	99.5	105.0	111.0	117.4	124.4
900	106.9	112.2	118.2	124.7	131.3	139.0

TABLE 2c

Maximum Spans for 5/16" (7-wire)
Extra High Strength Galvanized Steel
Messenger Strand Supporting (by Lashing)
Plastic-Sheath Telephone Cables.

Telephone Cable Pounds per Foot	Telephone Cable Diameter in Inches	Maximum Span in Feet: Tension not to exceed 50% of Rated Strength with NESC Storm Loads — Heavy Loading District	Medium Loading District	Light Loding District	Tension not to exceed 60% of Rated Strength with NESC Storm Loads — Heavy Loading District	Medium Loading District	Light Loading District
0.40	0.90	646	900+	900+	900+	900+	900+
0.60	1.10	550	766	872	770	900+	900+
0.80	1.20	485	685	782	695	900+	900+
1.00	1.40	438	611	707	631	880	900+
1.20	1.50	400	549	639	576	788	900+
1.40	1.60	370	500	582	532	720	837
1.60	1.70	344	458	531	494	662	759
1.80	1.80	323	425	488	463	611	697
2.00	1.90	305	396	452	436	566	644
2.20	2.00	288	371	423	412	531	603
2.40	2.00	274	348	399	392	501	568
2.60	2.10	261	329	377	374	474	535
2.80	2.20	249	312	357	357	449	506
3.00	2.20	239	298	339	342	427	480
3.20	2.30	229	284	322	327	406	458
3.40	2.40	220	272	307	314	387	437
3.60	2.40	212	261	293	302	370	418
3.80	2.50	204	251	280	291	355	399
4.00	2.50	197	241	269	281	341	383
4.20	2.60	190	231	259	271	327	367
4.40	2.60	183	223	249	262	314	353
4.60	2.70	177	215	241	253	303	339
4.80	2.80	172	207	232	245	293	328
5.00	280	167	200	225	238	284	317

TABLE 3b

Installation Sags and Tensions for Messenger Only Before Installing Plastic-Sheath Telephone Cable on 7/16" (7-wire) Extra High Strength Galvanized Steel Strand.

Span Length Feet	Temperature in Degrees Fahrenheit 0	20	40	60	80	100
			Tension in Pounds			
100	4666	4380	4093	3800	3494	3181
150	4661	4376	4091	3800	3497	3186
200	4655	4372	4089	3800	3500	3192
250	4648	4367	4087	3800	3504	3199
300	4639	4361	4084	3800	3508	3207
350	4629	4354	4080	3800	3513	3217
400	4617	4346	4076	3800	3518	3229
450	4603	4337	4071	3800	3524	3242
500	4588	4327	4066	3800	3530	3256
550	4572	4327	4066	3800	3530	3256
600	4555	4303	4054	3800	3544	3287
650	4537	4291	4047	3800	3552	3304
700	4518	4278	4040	3800	3560	3321
750	4498	4264	4032	3800	3569	3339
800	4477	4249	4024	3800	3578	3358
850	4455	4233	4015	3800	3588	3379
900	4432	4216	4006	3800	3598	3401
950	4408	4199	3996	3800	3609	3424
1000	4383	4181	3986	3800	3621	3448
			Sag in Inches			
100	1.2	1.3	1.4	1.6	1.7	1.8
150	2.9	3.1	3.3	3.5	3.8	4.2
200	5.1	5.4	5.8	6.3	6.9	7.5
250	7.9	8.5	9.1	9.8	10.6	11.5
300	11.6	12.2	13.1	14.1	15.2	16.6
350	15.8	16.8	17.9	19.2	20.8	22.6
400	20.8	22.0	23.4	25.1	27.1	29.4
450	26.2	27.9	29.8	31.9	34.3	37.0
500	32.6	34.6	36.8	39.4	42.3	45.6
550	38.9	41.5	44.4	47.5	50.8	54.2
600	47.4	50.2	53.2	56.6	60.4	64.8
650	56.0	59.3	62.6	66.5	70.8	75.7
700	65.0	68.4	72.4	77.0	81.9	87.7
750	74.4	78.0	82.2	87.0	92.8	99.0
800	85.0	89.6	94.6	99.8	105.8	112.6
850	97.1	102.3	107.9	113.9	120.3	127.2
900	109.4	115.3	121.3	127.4	134.1	141.6
950	122.4	128.8	135.4	142.1	149.4	157.3
1000	136.6	143.4	150.2	157.5	165.2	173.4

TABLE 3c

Maximum Spans for 7/16" (7-wire)
Extra High Strength Galvanized Steel
Messenger Strand Supporting (by Lashing)
Plastic-Sheath Telephone Cables.

Telephone Cable Pounds per Foot	Telephone Cable Diameter in Inches	Maximum Span in Feet: Tension not to exceed 50% of Rated Strength with NESC Storm Loads			Maximum Span in Feet: Tension not to exceed 60% of Rated Strength with NESC Storm Loads		
		Heavy Loading District	Medium Loading District	Light Loading District	Heavy Loading District	Medium Loading District	Light Loading District
1.00	1.40	765	1000+	1000+	1000+	1000+	1000+
1.50	1.65	631	841	943	925	1000+	1000+
2.00	1.90	537	695	776	782	1000+	1000+
2.50	2.05	473	601	673	688	875	982
3.00	2.20	424	529	592	616	769	854
3.50	2.40	382	471	523	550	678	762
4.00	2.50	352	427	475	507	614	685
4.50	2.65	322	389	432	465	561	623
5.00	2.80	298	358	397	432	515	571

TABLE 4b

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		300-ft.		325-ft.		350-ft.		375-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	62.0	2026	70.7	2089	79.2	2151	88.3	2213
No ice, no wind	20	63.8	1973	72.4	2038	81.4	2102	90.6	2164
No ice, no wind	40	65.6	1917	74.4	1983	83.5	2049	92.8	2113
No ice, no wind	60	67.5	1863	76.4	1931	85.6	1999	95.1	2065
No ice, no wind	80	69.3	1811	78.4	1882	87.7	1950	97.4	2017
No ice, no wind	100	71.4	1761	80.6	1834	90.0	1903	99.8	1970
Heavy-Final									
1/2" ice, no wind	32	98.0	--	110.2	--	122.8	--	136.1	--
No ice, no wind	60	70.4	1784	80.0	1846	89.7	1906	100.0	1965
No ice, no wind	100	74.9	1686	84.6	1752	94.5	1815	104.9	1875
Medium-Final									
1/4" ice, no wind	32	82.1	--	92.4	--	103.2	--	114.3	--
No ice, no wind	60	69.4	1821	78.5	1885	87.9	1950	97.6	2013
No ice, no wind	100	73.4	1717	82.7	1786	92.5	1853	102.5	1918
Light-Final									
No ice, no wind	60	68.5	1839	77.5	1906	86.9	1970	96.6	2034
No ice, no wind	100	72.3	1733	81.6	1802	91.4	1870	101.4	1935

Span Length		400-ft.		425-ft.		450-ft.		475-ft.	
Initial									
No ice, no wind	0	97.9	2275	107.4	2334	117.4	2394	127.8	2453
No ice, no wind	20	100.2	2227	110.0	2288	120.0	2347	130.7	2407
No ice, no wind	40	102.6	2178	112.5	2241	122.6	2300	133.2	2360
No ice, no wind	60	105.0	2131	114.9	2194	125.2	2225	135.9	2322
No ice, no wind	80	107.4	2083	117.5	2147	127.9	2210	138.7	2271
No ice, no wind	100	110.0	2036	120.1	2100	130.6	2163	141.6	2225
Heavy-Final									
1/2" ice, no wind	32	149.8	3295	163.6	--	178.5	--	--	--
No ice, no wind	60	110.6	2024	121.2	2077	132.3	2121	--	--
No ice, no wind	100	115.7	1932	126.6	1986	137.8	2036	--	--
Medium-Final									
1/4" ice, no wind	32	126.0	2695	137.7	--	149.8	--	162.5	--
No ice, no wind	60	107.8	2076	118.2	2136	128.9	2196	139.7	2254
No ice, no wind	100	112.9	1982	123.7	2044	134.7	2105	145.9	2165
Light-Final									
No ice, no wind	60	106.7	2097	117.1	2158	127.5	2219	138.3	2279
No ice, no wind	100	112.0	1999	122.5	2063	133.4	2125	144.4	2186

TABLE 4b

Initial Sags and Tensions with Cable in Place
and Final Sags for Ground Clearance Determination of
1/4" (7-wire) Extra High Strength Galvanized Steel Messenger
Strand Supporting (by Lashing) Plastic-Sheath Telephone Cable
0.80 Pounds per foot with Diameter 1.20 Inch.

Heavy, Medium, and Light Loading Districts

Initial or stringing tension of messenger strand only equals 1,100 pounds at 60°F

Span Length		500-ft.		525-ft.		550-ft.		575-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds	Sag in Inches	Tension in Pounds
Initial									
No ice, no wind	0	138.6	2512	149.6	2569	160.9	2625	172.6	2679
No ice, no wind	20	141.5	2466	152.5	2523	163.9	2578	175.6	2633
No ice, no wind	40	144.2	2419	155.4	2476	166.9	2533	178.7	2588
No ice, no wind	60	146.9	2375	158.3	2433	169.9	2489	181.8	2545
No ice, no wind	80	149.8	2331	161.2	2388	173.0	2445	184.9	2502
No ice, no wind	100	71.4	1761	80.6	1834	90.0	1903	99.8	1970
Medium-Final									
1/2" ice, no wind	32	175.6	2021	188.9	--	202.6	--	216.5	--
No ice, no wind	60	150.8	2311	162.6	2366	174.5	2420	187.1	2472
No ice, no wind	100	157.4	2224	169.2	2279	181.4	2334	193.9	2387
Light-Final									
No ice, no wind	60	149.4	2337	160.8	2393	172.7	2447	184.9	2501
No ice, no wind	100	155.8	2246	167.3	2304	179.3	2360	191.6	2415

Span Length		600-ft.	
	Temp. °F	Sag in Inches	Tension in Pounds
Initial			
No ice, no wind	0	184.4	2732
No ice, no wind	20	187.4	2688
No ice, no wind	40	190.6	2644
No ice, no wind	60	193.8	2600
No ice, no wind	80	197.0	2556
No ice, no wind	100	200.5	2517
Medium-Final			
1/4" ice, no wind	32	230.6	3318
No ice, no wind	60	200.0	2521
No ice, no wind	100	206.9	2440
Light-Final			
No ice, no wind	60	197.3	2555
No ice, no wind	100	204.4	2469

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